

C/CAG

CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

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Millbrae • Pacific • Portola Valley • Redwood City • San Bruno • San Carlos • San Mateo • San Mateo County • South San Francisco • Woodside*

AGENDA

The next meeting of the
Congestion Management & Air Quality Committee
will be as follows.

Date: Monday, January 31, 2005 - 3:00 to 5:00 p.m.
Place: San Mateo City Hall
330 West 20th Avenue, San Mateo, California
Conference Room C (across from Council Chambers)

PLEASE CALL WALTER MARTONE (599-1465) IF YOU ARE UNABLE TO ATTEND.

- | | | | |
|----|---|---|-----------------------|
| 1. | Public Comment On Items Not On The Agenda | Presentations are limited to 3 minutes. | 3:00 p.m.
5 mins.) |
|----|---|---|-----------------------|

CONSENT AGENDA

- | | | | | |
|----|---------------------------------------|------------------|-----------|-----------------------|
| 2. | Minutes of November 29, 2004 meeting. | Action (Martone) | Pages 1-4 | 3:05 p.m.
(5 mins) |
|----|---------------------------------------|------------------|-----------|-----------------------|

REGULAR AGENDA

- | | | | | |
|----|---|--|--|------------------------|
| 3. | Evaluation report on the Local Service Program (shuttles) and recommendation for next steps. | Action (Martone together with Rhine and Riordan) | Pages 5-6 & full report enclosed separately. | 3:10 p.m.
(40 mins) |
| 4. | Approval of report on Transportation Data - Census 2000. | Action (Dunio) | Pages 7 & full report enclosed separately. | 3:50 p.m.
(20 mins) |
| 5. | Recommendations for the formula to allocate Vehicle Registration Fee proceeds from AB 1546, to local jurisdictions. | Action (Duino) | Pages 9-11 | 4:10 p.m.
(10 mins) |
| 6. | Status report on the ramp metering study outcomes and potential next steps. | Information (Martone/Wong) | Pages 13-16 | 4:20 p.m.
20 mins |

- | | | | |
|----|---|----------------------|-----------|
| 7. | Adjournment and establishment of next meeting date. | Action
(Townsend) | 4:40 p.m. |
|----|---|----------------------|-----------|

NOTE: All items appearing on the agenda are subject to action by the Committee. Actions recommended by staff are subject to change by the Committee.

The next meeting is scheduled for February 28, 2005.

Other enclosures/Correspondence

- Evaluation report on the Local Service Program (shuttles)
- Transportation Data – Census 2000 Report

**CITY/COUNTY ASSOCIATION OF GOVERNMENTS
COMMITTEE ON CONGESTION MANAGEMENT
AND AIR QUALITY (CMAQ)**

**MINUTES
MEETING OF NOVEMBER 29, 2004**

At 3:05 p.m., the meeting was called to order by Chairman Marland Townsend in Conference Room C of San Mateo City Hall.

Members Attending: Duane Bay, Jim Bigelow, Sue Lempert, Arthur Lloyd, Karyl Matsumoto, Irene O'Connell, Barbara Pierce, Sepi Richardson, Lennie Roberts, Toni Stein, and Chairman Marland Townsend.

Staff/Guests Attending: Walter Martone, Sandy Wong, and Geoffrey Kline (C/CAG Staff - County Public Works), Tom Madalena and Mark Duino (C/CAG Staff - County Planning), Sylvia Gregory (Peninsula Rail 2000), Richard Napier (C/CAG Executive Director), Mark Poppel (City of Daly City), James Corless (MTC), and Adam Lodge (County Public Works).

1. Public comment on items not on the agenda.

- None.

CONSENT AGENDA

2. Minutes of September 27, 2004 meeting.

Motion: To approve the Minutes as presented. Bigelow/Lempert, unanimous.

REGULAR AGENDA

3. Presentation on Preliminary Regional Policies and Incentives to encourage Transit Oriented Development.

James Corless from MTC reviewed the Preliminary Regional Policies and Incentives to Encourage Transit-Oriented Development that were included in the CMAQ packet. The following are additional comments that were noted:

- The Federal Transit Administration (FTA) is also looking at ways to link transportation and land use planning.
- MTC is promoting these policies as a way to encourage transit ridership and to support the New Rail Starts Program that MTC has adopted as Resolution 3434.
- The primary performance measure for this program is to increase the number of residences and places of employment that are within one-half mile of a transit station.
- MTC anticipates having funding available to assist with the development of station area plans.

- It was noted that in past Transit-Oriented Development incentive programs, small businesses were not included. Consideration should be given to providing incentives where small businesses join together as part of a larger employment center.
- It was also pointed out that funding to maintain infrastructure at Transit-Oriented Development centers is often insufficient, especially if some of the businesses leave the site.
- Transit-Oriented Development is one tool to promote a jobs-housing balance along the transit corridors in the Bay Area.

4. Recommendation for C/CAG participation in the development of a Countywide Geographic Information System (GIS).

Walter Martone reported that the County of San Mateo is attempting to update the Countywide base map for use with GIS. This will include acquiring new aerial photographs of the entire County. It has been over ten years since many of these maps have been updated. Since that time there have been major innovations in technology and significant land use changes that have made the current base map out of date. Adam Lodge, Manager of the County's Public Works GIS project was available to answer questions.

- It was noted that a few jurisdictions (Foster City and Menlo Park) have already developed an advanced GIS for their community with very good resolution aerial photographs.
- It will likely be another decade before aerial maps are again updated. Therefore consideration should be given to using this opportunity to securing the best technology and highest resolution practicable for this update, instead of accepting something of lesser quality.

Motion: To recommend that the C/CAG Board participate in the development and funding of a Countywide GIS. Stein/Lempert, unanimous.

5. Approval of program for the 2005/06 Transportation Fund for Clean Air (TFCA) San Mateo County Program.

Sandy Wong reported that the recommendation of the C/CAG Staff and the Technical Advisory Committee is to continue to support the same successful programs as in the past. This will include the Countywide SamTrans Shuttle Bus Program, the Countywide Transportation Demand Management Program operated by the Peninsula Traffic Congestion Relief Alliance, and the Mid-Day Shuttle Program sponsored by the City of Menlo Park.

Motion: To endorse the Staff and TAC recommendations for the 2005/06 TFCA program in San Mateo County. Bigelow/O'Connell, unanimous.

6. Review and approval of a call for projects for the 3rd cycle Transit Oriented Development Housing Incentive Program.

Richard Napier reported that the recommendation is to continue the award-winning Transit Oriented Development Housing Incentive Program for a 3rd cycle. The guidelines for the program

are same with the added clarification of what it means to be "under construction." Staff also considered expanding the distance a project could be from a rail station from one-third of a mile to one-half of a mile. Upon review of the results of past cycles, there were so many applications within the one-third of a mile criteria that the amount of money per bedroom had to be reduced in order to fund all of the eligible projects. Therefore staff and the TAC are recommending that we maintain the one-third of a mile criteria so that a reasonable incentive of funds per bedroom can be maintained. It was also noted that the rule for measuring the distance is from the end of the rail platform.

Comments on the recommendation included:

- BART and CalTrain are expensive transit options and generally attract more upper income clients. Staff was requested to check into whether this is still the fact.
- It was noted that many employers are now providing transit subsidies for their workers to make rail transit more affordable.
- It was recommended that the program eligibility be expanded to require that the developments include at least 10% of the units being available below market rate for moderate- and low-income individuals. Most of the projects funded in the past were located in redevelopment areas and therefore already met this added criteria.

Motion: To recommend that C/CAG approve the 3rd cycle call for projects for the Transit Oriented Development Housing Incentive Program as recommended by Staff and the TAC, and that an additional incentive payment of \$250 per bedroom be provided to those projects that provide at least 10% of the units at below market rate for low- and moderate-income individuals. Bigelow/Roberts, passed with nine ayes, zero nos and one abstention (Bay).

7. **Recommendation for the adoption of a \$4 increase in the vehicle registration fee for FY 05-06 to support the management of traffic congestion and storm water pollution.**

Richard Napier and Walter Martone reported that the legislation that authorizes C/CAG to increase the Vehicle Registration Fee (AB 1546) has an expiration date of January 1, 2009. In order to avoid the loss of revenues, collection of an added fee must begin on the first date authorized (July 1, 2005). The State Department of Motor Vehicles (DMV) requires at least six months to set up the administrative procedures for the collection of the fee. Therefore staff is recommending that the authorization for the increase in the fee be adopted at this time based on a preliminary budget and program of services. This way the DMV can begin work on the administration for the fee collection and complete its tasks by July 1, 2005. CMAQ and the C/CAG Board will be presented with a more detailed program and budget prior to the actual collection of the fee on July 1, 2005.

After discussion about the pros and cons of a commitment to the hydrogen fuel vehicle program, it was decided to expand the category to include other alternative fuel technologies.

Motion: To recommend that C/CAG approve:

1. *The adoption of a Resolution authorizing an increase of four dollars (\$4) in the vehicle registration fee for vehicles registered in San Mateo County for Fiscal Year 05-06.*
2. *The adoption of the draft program plan and budget for the use of the fees with the amendment that "other alternative fuel technologies" be included as part of the \$350,000 budget.*

O'Connell/Richardson, unanimous.

8. **Recommendation to extend the Local Service Projects (shuttle programs) through March 31, 2005 to allow for evaluation of the program.**

Walter Martone reported that an evaluation of the Local Service Projects (shuttle programs) funded by C/CAG under the Congestion Relief Program, is expected to be completed by the end of December 2004. In order to allow sufficient time for programs to apply for continued funding without creating a gap in service, staff is recommending that the current contracts and a proportionate amount of funding be authorized through March 31, 2005.

Motion: To endorse the Staff and TAC recommendations to continue funding the Local Service Programs through March 31, 2005. Bigelow/Pierce, unanimous.

9. **Adjournment.**

It was decided that there were not sufficient items to warrant having a CMAQ meeting in December. Therefore the next regular meeting was scheduled for January 31, 2005. At 4:44 p.m., the meeting was adjourned.

C/CAG AGENDA REPORT

Date: January 31, 2005
To: Congestion Management and Air Quality Committee
From: Technical Advisory Committee
Subject: EVALUATION OF THE LOCAL SERVICE PROGRAM (SHUTTLES)

(For further information contact Walter Martone at 599-1465)

RECOMMENDATION

That the TAC:

1. Receive a presentation on the evaluation of the Local Service Program (Shuttles).
2. Accept the evaluation report.
3. Direct staff to develop criteria for the third cycle of the Local Service Program that utilizes the information that was developed from this evaluation process.

FISCAL IMPACT

C/CAG has budgeted \$500,000 to match local jurisdiction contributions for projects under the Local Service Program.

SOURCE OF FUNDS

The source of funds to support Local Service Program is from the C/CAG Member assessments that were adopted under the Countywide Congestion Relief Plan.

BACKGROUND/DISCUSSION

On September 11, 2003, the C/CAG Board approved the funding of various programs under the Local Transportation Services component of the Congestion Relief Plan. The intent of these programs was to increase the use of public transit by the residents of each local community, thereby reducing local congestion. Local jurisdictions were encouraged to participate in experimental efforts to provide transportation services for its residents that meet the unique characteristics and needs of that jurisdiction. The programs funded to date include the City of Burlingame, City of East Palo Alto (Senior Shuttle), City of East Palo Alto (Free Shuttle), City of Foster City, City of Half Moon Bay, City of Menlo Park, City of Millbrae, City of Redwood City, and City of San Carlos.

Also on September 11, 2003 the C/CAG Board approved the recommendation of its TAC and CMAQ Committees that C/CAG contract for an independent performance audit of all of the local service programs that have been funded to date. This will enable C/CAG to more

accurately compare the relative performance of each program and better judge which strategies are providing the most cost-effective service.

Linda Rhine from Nelson\Nygaard and Bruce Riordan from Elmwood Consulting conducted the evaluation and will present their findings and conclusions to the CMAQ.

ATTACHMENTS

Local Service Program Evaluation (enclosed separately).

C/CAG AGENDA REPORT

Date: January 31, 2005
To: Congestion Management and Air Quality Committee
From: Mark Duino
Subject: APPROVAL OF REPORT ON TRANSPORTATION DATA – CENSUS 2000
(For further information contact Mark Duino at 650 363-1855)

RECOMMENDATION

That the CMAQ Committee accept the enclosed report on transportation trends and statistics derived from Census 2000. This information will be incorporated into the next update of the Countywide Transportation Plan.

FISCAL IMPACT

No specific financial impact will result from this recommendation.

SOURCE OF FUNDS

Not applicable.

BACKGROUND/DISCUSSION

As part of the next update of the Countywide Transportation Plan, C/CAG staff is beginning to assemble data from a number of sources to assist with the evaluation of various transportation alternatives, assess trends and preferences of the traveling public, and develop recommendations for future transportation policy. A significant source of this data is from various tabulations and cross tabulations of the information that was collected during the 2000 Census. C/CAG staff will present the highlights of the information that is included in the enclosed report. All CMAQ members will receive binders at the meeting on January 31st for storing this report.

ATTACHMENTS

Report on Transportation Data – Census 2000 enclosed separately.

C/CAG AGENDA REPORT

Date: January 31, 2005

To: Congestion Management and Air Quality Committee
From: Technical Advisory Committee
Subject: RECOMMENDATIONS FOR THE FORMULA TO ALLOCATE VEHICLE
REGISTRATION FEE PROCEEDS FROM AB 1546, TO LOCAL
JURISDICTIONS

(For further information, please contact Mark Duino, at 650/363-1855)

RECOMMENDATION

That CMAQ accept the methodology for allocating AB 1546 funds to cities and the unincorporated County as contained in this report.

FISCAL IMPACT

AB 1546 will generate approximately \$2,591,132 per year. This estimate is based on assessing an extra four dollars on all 647,783 registered vehicles in the County. One half of this amount (\$1,295,566) will be used by C/CAG to fund NPDES activities and other half to fund transportation projects. The cities and the unincorporated County will receive one half of the funds in each of these categories through a formula allocation.

SOURCE OF FUNDS

Four-dollar (\$4) Motor Vehicle Fee dedicated to San Mateo County.

BACKGROUND/DISCUSSION

AB 1546 was chaptered (931) and became law on January 1, 2005. The purpose of AB 1546 is to generate more money to relieve congestion and mitigate stormwater runoff in San Mateo County.

Part of the funds will be used for an allocation to assist the cities and County in these tight budget times. The recommended allocation is calculated by averaging the population and number of registered vehicles per jurisdiction. These allocations are listed in Table 1. Both the population and registered vehicle data were taken from the Census 2000; however, the total number of registered vehicles was collected from the California Department of Motor Vehicles (DMV) for 2003.

Since the DMV could not provide registered vehicle data by jurisdiction, staff had to use the Census 2000 data. The Census 2000 data, however, had some imperfections, because the number of vehicles was reported by the number of households who had one, two, or three or more vehicles and not by the number of actual registered vehicles. Thus, households who had four or more vehicles could not be explicitly calculated, nor could the actual number of vehicles. Also, the Census 2000 data did not report motorcycles which the DMV did. Consequently, the countywide total from the Census did not match the DMV total. The DMV total was much higher. To overcome this discrepancy, staff proportionally adjusted each jurisdiction's number of vehicles (for three or more) upward so that the countywide total matched that of the DMV. Consequently, the registered vehicle data is estimated.

To help offset any inaccuracies resulting from estimation, staff is proposing to average registered vehicle data with accurate population data from Census 2000. The averaging tends to help those jurisdictions with lower proportions of vehicles per population.

ATTACHMENTS

Table 1

MD:fc – MLDO1539_WFU.DOC (12/30/04)

TABLE 1

	Population	Percent	Vehicles	Percent	Average	Revenue for 2005-2006	Estimated Total Revenue for 3 1/2 Years ²
Atherton	7,194	1.00%	9,926	1.50%	1.25%	13,857	52,406
Belmont	25,123	3.60%	25,810	4.00%	3.80%	42,126	159,314
Brisbane	3,597	0.50%	3,447	0.50%	0.50%	5,543	20,962
Burlingame	28,158	4.00%	26,477	4.10%	4.05%	44,897	169,795
Colma	1,191	0.20%	897	0.10%	0.15%	1,663	6,289
Daly City	103,621	14.60%	78,201	12.10%	13.35%	147,994	559,696
East Palo Alto	29,506	4.20%	17,818	2.80%	3.50%	38,800	146,737
Foster City	28,803	4.10%	29,208	4.50%	4.30%	47,669	180,277
Half Moon Bay	11,842	1.70%	11,148	1.70%	1.70%	18,846	71,272
Hillsborough	10,825	1.50%	13,929	2.20%	1.85%	20,509	77,561
Menlo Park	30,785	4.40%	27,182	4.20%	4.30%	47,669	180,277
Millbrae	20,718	2.90%	19,492	3.00%	2.95%	32,703	123,678
Pacifica	38,390	5.40%	38,839	6.00%	5.70%	63,189	238,971
Portola Valley	4,462	0.60%	6,281	1.00%	0.80%	8,869	33,540
Redwood City	75,402	10.60%	66,698	10.30%	10.45%	115,845	438,114
San Bruno	40,165	5.70%	38,443	5.90%	5.80%	64,297	243,164
San Carlos	27,718	3.90%	28,939	4.50%	4.20%	46,560	176,084
San Mateo	92,482	13.10%	84,874	13.10%	13.10%	145,222	549,215
South San Francisco	60,552	8.50%	51,577	8.00%	8.25%	91,457	345,880
Woodside	5,352	0.80%	7,666	1.20%	1.00%	11,086	41,925
Unincorporated County	61,275	8.70%	60,931	9.40%	9.05%	100,325	379,420
Total	707,161	100.00%	647,783 ¹	100.00%	100.00%	1,109,126 ^{3,4}	4,194,577 ^{3,4}

Notes: 1. The data from the DMV (647,783 vehicles) is the most current and is from 2003.

2. The total revenue for 3 1/2 years column is an estimation since the number of vehicles registered in San Mateo County will likely increase over time.

3. The revenue amounts for both the 2005-2006 column and the 3 1/2 years column are off by \$560 and \$2,096 respectively due to slight error associated with rounding the percentages.

4. A one-time computer cost of \$250,000 and an administration cost of \$124,000 per year have been deducted from the revenue totals.

C/CAG AGENDA REPORT

Date: January 31, 2005
To: Congestion Management and Air Quality Committee
From: Technical Advisory Committee
Subject: STATUS REPORT ON THE RAMP METERING STUDY OUTCOMES AND POTENTIAL NEXT STEPS

(For further information or questions contact Richard Napier at 599-1420 or Sandy Wong at 599-1409 or Walter Martone at 599-1465)

RECOMMENDATION

That the CMAQ Committee receive a status report on the ramp metering study outcomes and potential next steps.

FISCAL IMPACT

It is anticipated that funding may be needed to perform additional analysis. The exact amount of funds will depend on the extent of additional analysis recommended by the decision-making groups.

SOURCE OF FUNDS

The source of funds for additional analysis will come from C/CAG member assessments under the Countywide Congestion Relief Plan adopted by C/CAG on February 14, 2002, and augmented with matching funds from other transportation agencies.

BACKGROUND/DISCUSSION

On January 16, 2003, C/CAG entered into an agreement with DKS Associates to conduct a study of the impacts of a Ramp Metering Program along the Peninsula Corridor. As a result of the study outcomes, the Technical Advisory Committee (TAC) has concluded that ramp metering clearly has the potential to have overall positive benefits on travel times throughout the study area (the entire Route 101 corridor and the Route 280 corridor north of Route 380). These benefits would be accomplished with little to no negative impacts on local streets and roads. C/CAG staff will present the highlights of the study orally at the CMAQ meeting on January 31st.

The study conducted by DKS utilized state of the art models to project the impacts of implementing ramp metering along these roadway corridors. The TAC has accepted the report and conclusions as evidence that ramp metering can be an important tool in managing traffic congestion in these corridors, and that this phase of the study is now complete. Due to the fact

that this study was specifically based on forecasts, the TAC has decided that the next phase of the study should focus on exactly how ramp metering could be implemented, including counts of actual traffic at the ramps. This will allow us to determine if ramp metering parameters can be developed to achieve the results projected in the study, while making sure that the impacts (if any) on local streets and roads are acceptable to local jurisdictions. Therefore the TAC has:

- Determined that the forecasting and projection phase of this study is complete.
- Accepted the results of this study as evidence that ramp metering has strong potential for addressing congestion in the corridors studied.
- Determined that additional work, such as the development of a specific ramp metering plan based on the analysis of actual observed data, should be done before a comprehensive ramp metering plan can be presented to the CMAQ and C/CAG for consideration.

The attachment outlines the process that the TAC has endorsed for moving forward with this study and analysis.

ATTACHMENT

Potential Next Steps.

POTENTIAL NEXT STEPS

C/CAG staff in cooperation with the staff of all jurisdictions in the ramp metering corridors, will develop a ramp metering plan for consideration by CMAQ and C/CAG. Ramp metering would only be implemented if the plan is acceptable to the C/CAG Board. The components of the plan will include:

1. Plan Development and Oversight:

A Ramp Metering Technical Committee (RMTC) will be established, consisting of staff from C/CAG, Caltrans, the Metropolitan Transportation Commission, the San Mateo County Transportation Authority, and all jurisdictions affected by ramp metering, including the cities or towns of Atherton, Belmont, Brisbane, Burlingame, Colma, Daly City, East Palo Alto, Foster City, Menlo Park, Millbrae, Redwood City, San Bruno, San Carlos, San Mateo, South San Francisco, and County of San Mateo.

The RMTC will be charged with the responsibility to develop a specific Ramp Metering Plan. Some of the items that this Plan will address include:

- Additional analysis needed to predict traffic operations at specific locations of concern.
- Particular intersections need to be monitored.
- On-ramp configurations for metering (number of lanes, HOV by-pass lane, meter head locations, queue detector locations, etc.).
- Implementation phasing (i.e., US 101 between SR 92 and Santa Clara County line; US 101 Between SR 92 and SF County line; I-280 between I-380 and SF County line).
- Metering rates at each location.
- Hours of metering operation.
- What to do during emergencies or incidents.
- Frequency of RMTC meetings.
- Decision making process in terms of making changes to metering rates, metering hours, etc. in response to field conditions.
- Process for modifications to the Ramp Metering Plan.

2. Capital Improvement Scoping:

The RMTC will work with Caltrans to develop a ramp metering capital improvement program. Capital improvements may include:

- Install "spillover" detectors at the bottom of the on-ramps.
- Install ramp metering hardware and software equipment.
- Selection of specific on-ramps to be widened or modified.
- Develop capital projects and construction documents for ramp widening/modification.

- Identify available funding from countywide, regional, state, or federal sources.

It is anticipated that capital costs will be funded through federal, state, regional, and countywide programs. There will be no fiscal impact to the individual cities and the County.

3. Agreements

Agreement(s) between C/CAG and Caltrans must be developed prior to the implementation of any ramp metering program. The RMTC will be charged with the development of these draft agreements for review and consideration by CMAQ and C/CAG. Such agreement(s) may include mutually agreed upon metering parameters, emergency procedures, and maintenance procedures.

4. Monitoring Process

The RMTC will decide the exact locations for on-going traffic monitoring and the process for review of this information. The primary purpose of the monitoring will be to measure the success of the ramp metering program and to fine tune its operation. The RMTC will also decide if a before-and-after study should be conducted.



January 2005

**City/County Association
of Governments of
San Mateo County**

**Local Service
Program Evaluation**

Submitted By:

Nelson|Nygaard
consulting associates

And

Elmwood Consulting

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Chapter 1. Introduction

Background

The City/County Association of Governments (C/CAG) has established a Local Transportation Services component of the Countywide Congestion Relief Plan. Its purpose is to increase public transit usage by residents in their local communities, thereby reducing local traffic congestion. Individual cities are encouraged to participate in this demonstration program by providing public transit services tailored to address their unique characteristics and needs.

In November 2002, C/CAG awarded its first round of funding to seven cities that applied for these countywide funds on a competitive basis. Approximately \$462,000 was allocated to these cities with the understanding that they would provide dollar for dollar matching funds and that the funds would be used for direct services, not for administration, overhead or other staff costs. These Local Transportation Services Program funds are intended for cities to provide local services within their jurisdictional boundaries or in cooperation with neighboring jurisdictions to improve mobility and reduce home-based trips. Cities were given the option of directly operating services or contracting with a third party. The basic parameters require cities to coordinate with SamTrans and the Peninsula Traffic Congestion Relief Alliance, contribute in-kind city staff time, and provide a local service to serve residents from their home to employment, school, and shopping facilities or to connect with regional transit services.

In May 2003, C/CAG began the process for a second round of funding for the Local Transportation Service Program. The purpose of the funds in the second round was to initiate new local transportation services, augment existing services or continue services that were previously funded under this program. In this cycle, priority was given to funding existing programs before funding new services. A scoring process was established for re-funding existing projects that provided information on service delivery, performance, and other special considerations. Other parameters such as the required 50% matching funds remained the same. Seven cities operating eight different shuttle services were awarded funding in the fall of 2003.

With an evaluation underway, the C/CAG Board approved an extension of the local shuttle programs through March 2005. This allows the services to continue operating without interruption while the program evaluation is complete and the next cycle of applications for existing and new projects is released.

Study Purpose

The purpose of this study is to conduct an evaluation of the Local Service Program component of the C/CAG Congestion Relief Plan. When the second cycle of the Local Service Program was approved, the C/CAG Board adopted the following recommendation:

"C/CAG should contract for an independent performance audit of all of the local service programs that have been funded. This will enable C/CAG to more accurately compare the relative performance of each program and better judge which strategies are providing the most cost-effective service."

C/CAG contracted with Nelson\Nygaard and Elmwood Consulting to conduct the first independent evaluation of the shuttle program. It includes both a quantitative and a qualitative analysis. For each service, the consulting team conducted interviews with city staff and key stakeholders, made on site observations including riding the shuttle services, interviewed riders and/or conducted onboard surveys, and collected and analyzed detailed information on service delivery, performance and other key features. This comprehensive approach resulted in an in-depth understanding and analysis of each service.

Report Overview

This report consists of five chapters. Following this introduction, the next four chapters are:

Chapter 2 presents a detailed review of each shuttle program. It describes each service, how it operates, who rides the service, its relationship to other services and presents operating and cost data. Included in this chapter is a matrix comparing and contrasting all of the services from both a qualitative and quantitative perspective.

Chapter 3 reviews the best practices of these services and discusses examples from shuttle services operating in other Bay Area communities.

A series of service standards and performance measures are recommended in **Chapter 4**. These standards are based on experience with the San Mateo County shuttle services and other Bay Area shuttle services. This chapter also presents a recommended standard report for shuttle services to ensure that all services consistently and uniformly report operating and cost data.

Finally, **Chapter 5** summarizes the key findings and recommendations.

Chapter 2. Shuttle Service Programs

An evaluation of the existing shuttle programs is valuable in assessing the impact of these services on their local communities. Through the Local Service Program, the City and County Association of Governments funded several shuttle services, including programs in the following cities:

City	Sponsor	Manager
Burlingame	City of Burlingame	Peninsula Traffic Congestion Relief Alliance
Foster City	City of Foster City	City of Foster City
Millbrae	Millbrae Senior Center	City of Millbrae Parks and Recreation Department
East Palo Alto	City of East Palo Alto	City of East Palo Alto Public Works Department
Half Moon Bay	discontinued	
San Carlos	City of San Carlos	City of San Carlos Public Works Department
Menlo Park	City of Menlo Park	City of Menlo Park

This section provides an overview of each of the shuttle programs, including service parameters, operating characteristics, interaction with other transit services, on-site observations, and a quantitative analysis. An interview guideline was sent to staff at each city in advance of our face-to-face meetings to help them understand the type of information we were seeking. A copy of the interview guide is found in Appendix A. Our on-site shuttle observation form is shown in Appendix B.

A summary overview of each of the shuttle services is presented in Figure 2-6. Operating and cost statistics are shown in Figure 2-7. Both of these figures are found at the end of this chapter, on pages 2-27 and 2-28.

North Burlingame Shuttle

Service Description

The City of Burlingame works with the Peninsula Traffic Congestion Relief Alliance to implement the North Burlingame Shuttle service. The service was approved in January 2003 and service began operation in July 2003. The North Burlingame Shuttle is a fixed route connecting the Millbrae Intermodal Station (including BART and CalTrain) with Peninsula Hospital and Mercy High School. The shuttle also serves the residential areas along Adeline Road and El Camino Real. Primary shuttle users are Mercy High School employees and students. The shuttle operates weekdays from 6:30am –9am, and 3:30pm–6pm. Parking Company of America (PCA) is the contract operator.

Project Purpose

The major objective of the North Burlingame Shuttle program is to reduce local area congestion along Adeline Street around Mercy High School bell times. A secondary objective is to encourage the use of transit as a safe, convenient, and affordable form of transportation for High school employees and students alike and to serve Peninsula Hospital. The North Burlingame Shuttle service is meeting the original intent and purpose of its objectives.

Service Impact

The North Burlingame Shuttle has been well received by the surrounding community. Ridership has steadily increased as awareness of the program has spread. The shuttle provides an invaluable service to the high school since both topography (hilly) and distance (nearly 2 miles) are obstacles for students and employees riding CalTrain or BART. The shuttle has been especially important in solving the “last mile” problem of commuters from the Millbrae Intermodal Station.

Opportunities and Constraints

One of the major constraints of the North Burlingame Shuttle is attracting riders to and from Peninsula Hospital. Participation from the Hospital has been limited due to some difficulty coordinating with hospital staff and providing service to meet employee shifts which conflict with Mercy High School bell times. The Peninsula Traffic Congestion Relief Alliance has made commendable efforts to build relationships with the hospital.

There are opportunities to increase ridership in the coming years with the development of a new Mills-Peninsula facility. The facility will replace the existing, seismically unsafe building. The new development will increase the number of employees and patients, and may create parking shortages especially during the expansion phase.

Interface with SamTrans and other Services

The North Burlingame Shuttle tries to coordinate its schedule with existing transit services in the area. However, this is an ongoing challenge because BART and CalTrain schedule changes do not occur at the same time so the shuttle service could conceivably need to adjust its schedule as much as four to five times per year to coincide with both rail carriers. Shuttles depart shortly after CalTrain arrives in the morning, and in the afternoon, schedules have been adjusted to adapt to departing train schedules. The North Burlingame Shuttle does not overlap with SamTrans' existing routes, and actually complements routes 390/391 by departing shortly after this bus arrives.

Marketing and other Public Information

The Peninsula Traffic Congestion Relief Alliance advertises the North Burlingame Shuttle service using a variety of mediums. The Alliance has held a number of different outreach efforts with both Mills-Peninsula Hospital, and Mercy High School. Alliance staff members have set-up information tables at employee fairs and initiated an ambassadors program on the first day of service, where staff members escorted transit riders arriving at the Millbrae Intermodal Transit Station to the shuttle pick-up area, as well as passing out helpful information and schedules.

The Marketing Director at the Peninsula Traffic Congestion Alliance produced a number of advertisements. Press releases are periodically prepared and issued to local newspapers, as well as newspapers in the East Bay (where many commute from). The Alliance also purchased advertisement space in local newspapers to market the shuttle service. Articles were written for the hospital and high school newsletter. The high school has played an important role in advertising the service by including information in material sent home to families before the start of the school year. In addition, commercial airtime was purchased on local television channels.

Another effective medium of distributing public information was linking the shuttle program to the Bay Area Transit website, www.511.org. Additionally, the information on the North Burlingame Shuttle is available through the San Mateo County Transit website.

On-Site Observations

The City of Burlingame has contracted with Parking Company of America (PCA) to provide services in a 21-passenger shuttle bus (not wheelchair-lift equipped). The consulting team observed that the shuttle bus was clean with cushioned seats, and equipped with grab-bars, luggage racks, and overhead handles. The bus was clearly labeled with the name of the route, with a schedule posted inside. The driver greeted passengers, and was knowledgeable about connecting services.

Ridership/Data Collection

The shuttle bus driver collects ridership data on a daily basis. The driver submits this information to a supervisor at PCA on a daily basis. Each week these worksheets are submitted to the Alliance, and then entered into ongoing worksheets. A one-way ride is recorded as one passenger trip.

Shuttle ridership has increased since the opening of the Millbrae Intermodal Station. Ridership has increased by nearly 200 passengers a month since the start of the shuttle program. The service carries about 8,200 passengers per year.

Passenger Feedback

During our observations, members of the consulting team informally interviewed riders about their experience with the North Burlingame Shuttle. Those interviewed were all affiliated with Mercy High School, though there was a mix of students, sisters, and staff. Most had taken either CalTrain or BART, though two staff members arrived at the Millbrae Intermodal Station on SamTrans route 391.

Feedback was mostly positive. One student noted that the shuttle provided an affordable alternative to using the school provided shuttle service, and also allowed her parents an easy commute. Another student noted that having access to the shuttle service from CalTrain enabled her parents to go directly to work, instead of rerouting their commute to drop her off at school.

Another passenger stated that having the shuttle run until 6pm allowed her to stay and participate in after school activities. The shuttle is clearly addressing an important need for students in the area.

Amongst comments to improve the service, the majority of riders responded by asking for “more” service—longer hours and more frequent service.

Operating and Cost Data

The North Burlingame Shuttle operates 1,530 vehicle service hours at an annual cost of \$67,120. Over 8,000 passengers are carried annually. The cost per passenger is \$8.14. The shuttle serves about 5 passengers per hour. These figures are obtained from information provided by the Alliance.

Foster City Connections

Service Description

The City of Foster City developed and manages a two-route shuttle service – the Blue Line and Red Line. These two fixed routes connect residential neighborhoods to shopping centers, the CalTrain Hillsdale Station, schools, the library and recreation centers. Primary shuttle users are seniors and students. Each shuttle route operates weekdays only from 9:30am-3:30pm.

The Blue Line runs a 7-mile loop around the west side of Foster City connecting Charter Square Shopping Center, the Recreation Center, Bridgepointe Shopping Center, Sea Cloud Park, and Edgewater Place Shopping Center. The Red Line serves a larger area and connects both the East and West sides of Foster City. The Red Line follows SamTrans Route 251, which is an extended loop running from Bridgepointe Shopping Center to Hillsdale Shopping Center. The loop also serves the library and Community Center, and the residential communities along Beach Park Boulevard.

Project Purpose

The Foster City Connections Shuttle is intended to improve mobility for seniors and students who otherwise would have limited options. The Connections shuttle was also developed in response to SamTrans service cutbacks on the 251, from 30-minute frequency to 60 minutes. The City wanted to maintain half-hour service headways since the 251 line was popular amongst city residents.

Service Impact

The Connections Shuttle program has been very well received by the Foster City community. Ridership consists mostly of Bowditch Middle School students and seniors. For both user groups, the Connections Shuttle is an affordable, convenient and reliable form of transportation. Though the school does not rely solely on the shuttle routes to transport students, it offers students participating in after-school activities an option for traveling home, to the library or to the recreation center. With excellent schedule and route information available, the service has seen growing ridership.

Opportunities and Constraints

The Connections Shuttle program has developed into a reliable and recognized service in the Foster City community. Given this success and growing ridership, the City has the opportunity to improve service either by adding an additional shuttle or by obtaining larger vehicles to accommodate more passengers and expand capacity.

The popularity of the program has also resulted in overcrowding of buses in the afternoon at Bowditch school bell times. To confront this problem, the City posted flyers in the

school office and sent home notices to parents warning them that there is a limited number of students the shuttle can carry. These notices explain that an alternative to the shuttle is riding SamTrans. The shuttle is preferred because the shuttle service is free of charge and SamTrans has a student fare of \$0.75.

Interface with SamTrans

The Connections Project Manager has worked closely with SamTrans to coordinate services. She has been careful to design the service to not draw passengers away from SamTrans, but rather to broadly encourage the use of transit. She has worked closely with the SamTrans Marketing Staff to advertise both SamTrans and the shuttle service in the same brochure and to distribute information in a coordinated fashion. One very effective method the Project Manager used to interface well with SamTrans service was to make one schedule that included SamTrans scheduled buses as well as the Connection Shuttle. This was especially effective for the Red Line, which shares the same route as SamTrans 251.

Another effective coordination effort is shared space on the SamTrans bus stop signs. The Connections Shuttle uses the SamTrans bus space to advertise its shuttle stops.

Marketing and other Public Information

Marketing and distributing public information has been a strong point of the program. The Connections Shuttle has been advertised on the Foster City website as well as on the City's cable TV channel.

The Connections Shuttle Program also provides schedules and maps at a number of racks throughout Foster City. The racks are located in grocery stores, city offices, libraries, recreation centers, and schools. The Project Manager takes on the task of keeping racks stocked, and makes an extra effort to obtain SamTrans information to stock the racks as well. These racks serve as a community transportation resource.

Other methods of advertising include the signs at bus stops (shared with SamTrans), fliers at schools, mailings to home owners associations and apartment managers, and press releases to local papers. The Project Manager also identified bilingual needs in the community, and provides shuttle information in both English and Cantonese, which reflects a high level of commitment to Foster City's unique needs.

On-Site Observations

Foster City contracts with Serendipity Land Yachts to operate its shuttle service. Serendipity provides a 24-passenger wheelchair accessible vehicle and backup as necessary for each route. On-site observations in November 2004 revealed that the vehicle was very clean with little or no debris and clean windows. The seats were padded and there was space to place bags or carts. Though the driver did not routinely call out stops, he did beckon to passengers if their stop was approaching. The driver was

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courteous, greeted passengers as they were boarding, and was able to answer questions and provide information.

A passenger survey was conducted on the two Connections routes. The results are presented on pages 2-8 through 2-13.

Ridership/Data Collection

Shuttle drivers are responsible for collecting and recording ridership data. Drivers keep a log in the vehicle and record ridership data by route for each run and submit it to the Project Manager. The Project Manager accumulates the data and tracks it over the course of the year.

The City has seen steady ridership growth since service start-up in February 2003. The Red Line consistently shows greater ridership than the Blue Line, averaging 631 weekly passengers in the current fiscal year.¹ The Blue Line carries about 281 passengers per week.

Passenger Feedback

Though the consulting team did not interview passengers while riding the shuttle, we were able to gather feedback from passenger surveys.

The comments from the surveys largely reflect three trends. The first is that the shuttle is very convenient (in terms of both hours and shuttle comfort) as well as in the destinations the shuttle serves. One rider stated, "It's convenient and free. It covers all the shopping areas and the schools in Foster City." This statement reflects many of the comments. The second theme is that the shuttle service is free of charge to passengers. Passengers repeatedly mentioned this comment. The third trend is that the shuttle service is viewed as more reliable than other transit services in the area. One rider commented, "It's free, convenient, and faster than the bus!"

Overall, passenger feedback was positive and complimentary to the service and to the drivers.

Operating and Cost Data

The City of Foster City operates two routes in its shuttle program at an annual cost of \$99,794. Serving over 40,000 passengers a year, the cost per passenger is \$2.45. The number of passengers per hour is over 13.

All quantitative data was obtained from City and their accounting of annual ridership and costs.

¹ Staff Report to Mayor and City Council, November 15, 2004.

Onboard Passenger Survey

Methodology

Passenger surveys were distributed to riders boarding the Foster City Connections Shuttle on Wednesday, December 1, 2004. The survey was brief, asking five key questions, and was printed in both Cantonese and English. The survey sought information about the riders' purpose, frequency of use, alternatives to using the shuttle, and areas for improvement. There was also a space for comments. A copy of the survey can be found in Appendix C.

Bus drivers handed the survey forms to passengers as they boarded the bus. Passengers were asked to complete the survey form while on the bus and return it to the driver prior to alighting.

There were 39 completed surveys for the Red Line, and 14 completed surveys for the Blue Line as shown in Figure 2-1. Since results were similar, the surveys were analyzed together.

Figure 2-1 Number of Passenger Surveys Collected

Route	Number of Surveys Collected
Red Line	39
Blue Line	14
Total	53

Findings and Analysis

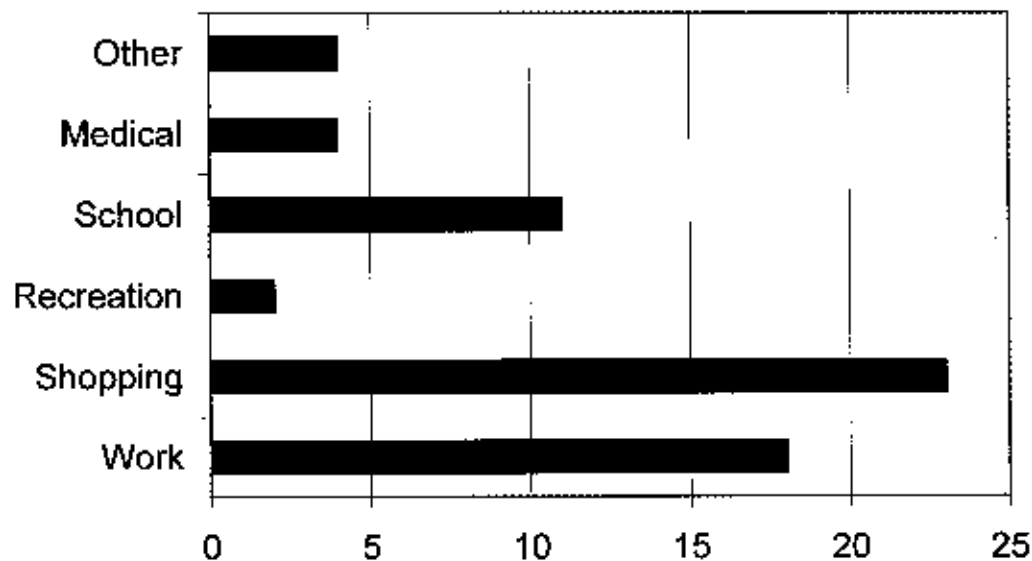
Trip Purpose

To determine trip purpose, respondents were asked to identify the purpose of their trip. The respondents were able to choose from the following options:

- Work
- School/College
- Shopping
- Medical/Dental
- Recreation (sporting event, hotel, restaurant)
- Other (with the option to specify)

Primarily, passengers were traveling to work, to shop or to school. This reflects the ridership base of students and seniors and to a lesser extent, commuters. Figure 2-2 depicts the breakdown of passenger responses.

Figure 2-2 Breakdown of Trip Purpose Responses



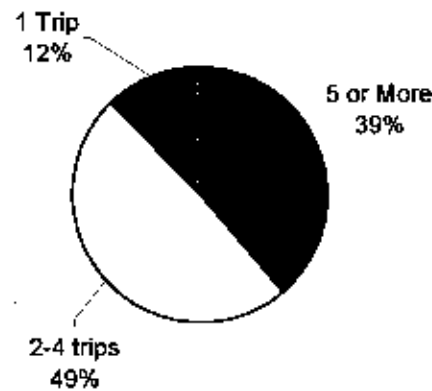
Rider Frequencies

Riders were also asked about how frequently they ride the shuttle service. Passengers were able to choose between the following options:

- 5 or more trips per week
- 2-4 trips per week
- 1 trip per week
- Less than 1 trip per week
- First time riding

All passengers surveyed rode the shuttle between one and five times per week; none were first time riders, and none rode less than one time per week. This indicates that the Connections Shuttle program has built up a regular ridership that depends on the shuttle for at least one trip per week. The majority of respondents (88%) indicated riding more than twice a week, of which 39% indicated riding five or more times per week (see figure 2-3 below).

Figure 2-3 Rider Frequency Responses

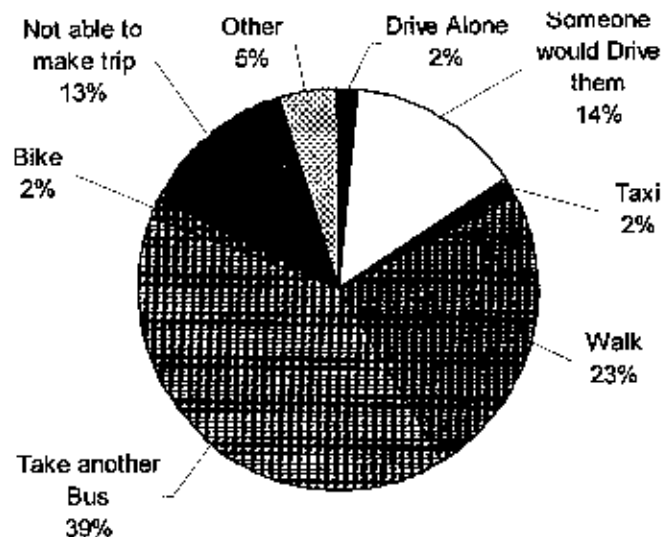


Alternatives to Using the Connections Shuttle

The third question on the survey asked, "If this service were not available, how would you make this trip?"

Most survey respondents chose to mark more than one option. The majority of respondents indicated they would take a different bus (mostly respondents from the Red Line which overlaps with the SamTrans route 251) or walk. 14% of respondents specified that they would have someone drive them if the shuttle was not available. Another 13% stated they would not be able to make the trip if there was no shuttle service. It is clear that the shuttle is serving a critical need in the community. Figure 2-4 presents the responses to this question.

Figure 2-4 Alternatives to Taking Shuttle Service

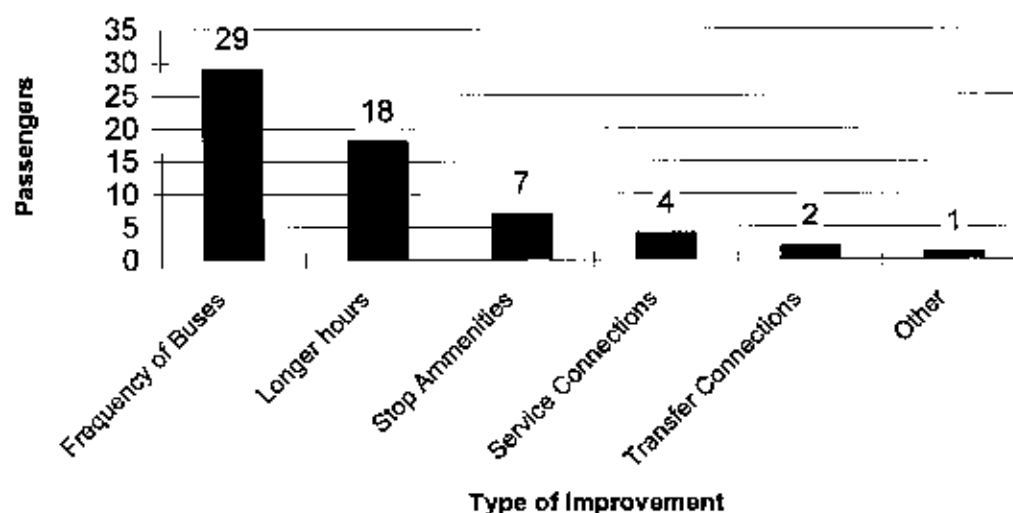


Improvements to the Shuttle Program

Passengers were asked what one improvement they would most like to see to the Connections Shuttle Program.

By far, the majority requested greater frequencies and longer hours of operation. The remaining respondents choose between better connections to other bus routes or to transfer centers, or improved stop amenities. Figure 3-5 shows the answers to this question.

Figure 2-5 Desired Improvements to Shuttle Service

**Overall Impressions and Comments**

The survey supported information provided by City staff. Riders use the shuttles to go shopping centers, schools or work. Most riders use the service regularly, and are dependent on the shuttle as a reliable (and occasionally their only) form of transportation.

Desired improvements are for more frequent service and extended service hours. There were no complaints about comfort or quality, safety or reliability.

The last question on the survey asked for customer comments. Without exception these comments complimented the service, the driver or the City for providing the service. Clearly, those passengers who responded to the survey are satisfied, and impressed with the quality of service.

Millbrae Senior Shuttle Service

Service Description

The City of Millbrae in conjunction with the Parks and Recreation Department coordinate a door-to-door senior service. City staff handles all administrative aspects of the service and provide day-to-day operations. The city owns the 16-passenger wheelchair equipped van used for the service. It is stored on City property. Staff is housed within the Millbrae Senior Center.

The shuttle service is available weekdays between 9am-3pm. Advance reservations are made through the receptionist at the senior center, with same day reservations based on availability. Fares vary depending on the trip purpose and destination. For example, fares range between \$3.00 and \$8.00. A round trip to a doctor's office in Millbrae costs \$5.00 and a round trip to Kaiser in South San Francisco costs \$8.00.

In addition to operating as a door-to-door service, the shuttle also provides service to the senior-oriented activities offered through the recreation center. Standing trips include a shopping run, and a once a week walking club.

Project Purpose

The primary purpose of the Millbrae Senior shuttle Service is to improve mobility for seniors. One of the original objectives of the program was to expand service to include students at Taylor Middle School. The plan was for the shuttle to transport students crossing El Camino Real to reach Taylor Middle School and for providing transportation for after school activities. However, this plan was not realized because school-related requirements proved to be too difficult.

Service Impact

The Millbrae Senior Shuttle is a very personalized service. The driver is a part-time Millbrae City employee who knows all of the passengers by first name and provides a high comfort level. Seniors enjoy the friendliness and customized service that is provided by the driver who offers passengers help with their bundles or groceries. The service is considered a "lifeline" for those seniors who take advantage of it.

The program has been operating since October 2003. Most months the shuttle has carried between 200 and 300 rides. During the summer months and over winter recess, the shuttle transports youth in conjunction with the Millbrae Youth Center.

Opportunities and Constraints

The Millbrae Senior Shuttle Program has developed into a service that many seniors have come to depend on. However, according to City staff, the service is not fully realizing its potential. One option under consideration is to scale back the senior service to three

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days per week. Other options might include further exploration in serving a larger segment of the youth community either by addressing school-related transportation requirements or serving youth in a non-school setting.

A major constraint facing the Senior Shuttle program is having only one part-time driver. Though there are two backup drivers, they have other responsibilities within the City. The service is limited to the hours the driver is able to work.

Interface with SamTrans and other Services

The Millbrae Shuttle program has worked minimally with SamTrans. As a senior service, it is intended to supplement, not replace Redi-Wheels, the ADA service provider in San Mateo County. Since Millbrae is largely in a hilly area, with mostly single family homes, it is difficult for some seniors to get to a SamTrans bus stop. They may not be interested in applying for ADA service at this time so the Senior Shuttle program serves an important need for this population. Staff reported that they heard from some seniors that Redi-Wheels service was less reliable than the Millbrae Shuttle.

Marketing and other Public Information

Marketing and distributing public information is somewhat limited. Currently, the Parks and Recreation department market the shuttle program through three main avenues. It is advertised on Millbrae City Television (MCTV), listed in the City's Parks and Recreation seasonal catalogue and a senior newsletter is mailed to over 1100 addresses on a bimonthly basis.

The Parks and Recreation catalogue devotes a section on seniors, which includes information on the Senior Shuttle. Fare and contact information and a general service description are offered. Every household in the City is mailed a copy of the Parks and Recreation guide.

Other than these methods, the program relies heavily on word of mouth within the senior community to build ridership. Staff at the Parks and Recreation department believes there is some latent demand for the service.

On-Site Observations

Our team rode the shuttle bus and observed passenger pick ups and drop offs. It was clear that passengers were very appreciative of the personalized and high quality service. The vehicle was spotless. The seats are cushioned, windows can be opened and armrests are adjustable. The ride on the shuttle is very comfortable.

The driver cleans the interior of the bus at the end of the day and is responsible for keeping it clean.

Ridership/Data Collection

The driver is responsible for collecting and recording ridership data. As each passenger boards, the driver records the origin and destination, and then the passenger signs the log and pays the fare. Each round trip is recorded as two trips (though the fare is paid only once). The ridership logs are used to verify the appropriate fare is being collected and submitted to the Parks and Recreation office for deposit.

The driver logs are submitted on a daily basis to the City's Project Manager (who also directs the Parks and Recreation department). The ridership data is then recorded into an electronic file that tallies monthly ridership and then wraps up into yearly ridership.

Passenger Feedback

Though we did not formally interview passengers while riding the shuttle, we did casually ask passengers a few questions.

We briefly asked passengers about their experience with the Seniors Walking Club. They stated they were happy with the service, especially with the care and consideration of the driver.

One passenger commented that "the service is very convenient and the driver is very nice and accommodating." Passengers seemed content with the service, and said that the service allowed them freedom and mobility to get around town. Reliability was also noted as a positive aspect of the service.

Operating and Cost Data

The Millbrae Senior Shuttle program operates at an annual cost of approximately \$24,000 and carries 2,836 annual passengers. The cost per passenger is \$8.29. Passenger productivity is about two passengers per hour.

All quantitative information was provided by the City of Millbrae.

San Carlos Optimum Operational Transit (S.C.O.O.T.)

Service Description

The San Carlos SCOOT is operated by the City of San Carlos for its residents, workers and visitors. SCOOT began operation on November 18, 2002 and has operated continually since that date. SCOOT operates two complementary services—a set of 9 fixed routes serving schools, CalTrain, the Youth Center, the Library and local parks plus an extensive door-to-door service serving all San Carlos destinations. The routes are used by students and commuters while the riders of the door-to-door shuttles are primarily seniors. SCOOT

operates Monday – Friday 6 am to 6:45 pm with the routes running 7-8:30am and 2:30-3:45pm and the door-to-door service available at all other hours. SCOOT leases nine 24-26 passenger vehicles from Kevin and Leonor Davis Shuttle Leasing and contracts day-to-day operations to Serendipity Landyachts.

Project Purpose

SCOOT was created to (a) reduce traffic congestion at gridlocked intersections (particularly near schools), (b) reduce air pollution from vehicle emissions, (c) improve the quality of life for city residents—seniors, youth and commuters—and (d) increase CalTrain ridership at stations with parking shortages. SCOOT is making significant progress towards each of these objectives.

Service Impact

One of the key targeted intersections (San Carlos Ave and Dartmouth/Club Ave) went from LOS F (gridlock) before SCOOT to LOS C after the program was implemented. In the same time period, city statistics show a 30 percent reduction in traffic accidents along San Carlos Ave. Quality of life data, collected through SCOOT's e-mail and telephone hotlines, shows that seniors, youth and others have significantly improved their mobility. The Youth Center has increased its hours, staff and activities due to increased youth attendance made possible by safe, convenient and free after-school transportation. Businesses are reporting that in-town shoppers are using the shuttle to frequent San Carlos businesses.

Opportunities and Constraints

In the past two years San Carlos has invested more in local transit than any other similar sized Bay Area city. SCOOT has built tremendous support from its riders and the general public in San Carlos by taking a private sector-style approach. As opposed to creating a transit "program," San Carlos started by finding out what its citizens needed and then moved aggressively to meet those specific mobility needs. Once it created highly attractive services, it has worked very hard to attract and retain riders through heavy emphasis on customer service, safety, reliability and convenience. SCOOT understood that it was critical to ease new customers' fears about public transit.

SCOOT is having a major impact in San Carlos and it has broken exciting new ground in Bay Area "local mobility," but the service requires a hefty budget, more than \$900,000 in FY 03-04. Even with a more efficient operation in the current year (\$700,000 with no service cuts), sustaining this level of funding is taking much attention from city staff. A 16-volunteer Funding Task Force recently recommended a \$59 parcel tax as the most viable option to supplement BAAQMD and C/CAG funding over the next five years. The parcel tax will be voted on in March 2005.

Problems with a change in vendors produced service problems in September. While the new vendor was more cost-competitive, they provided far fewer hours of driver training than was needed. The companies also had increased driver turnover because they

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operated more split shifts. Service has come back to previous levels, but only after considerable attention from city staff. As with most shuttle programs, on-going operational problem-solving occupies much valuable staff time.

Demand for door-to-door services continues to increase and SCOOT is now not able to meet all ride requests. In addition, the program's size has strained its administrative capacities, at times limiting the development of program enhancements.

Interface with SamTrans and other Services

SCOOT's door-to-door and route services both help residents reach the San Carlos CalTrain station and SamTrans' services on El Camino Real. SCOOT is in close contact with SamTrans staff. SamTrans has supported each of SCOOT's funding applications to BAAQMD. When SamTrans eliminated a local route (#261) in August 2004 SCOOT helped to pick up some of the affected riders. SCOOT has had continued difficulty getting CalTrain to help with signage and information for its services at the San Carlos CalTrain station.

Marketing and other Public Information

The service is publicized through presentations by the Outreach Coordinator, phone and e-mail hotlines, local cable TV, brochures, flyers, special events and the city's website. The Outreach Coordinator works to promote the program directly through local community groups, the senior and youth centers, PTAs, the Chamber of Commerce, local businesses, the school district and the Peninsula Traffic Congestion Relief Alliance.

On-Site Observations

All vehicles include wheelchair lifts. Seats are comfortable and the passenger area is fairly roomy. Buses are clean and clearly signed for viewing by riders and residents. Drivers are friendly and have an excellent relationship with the passengers.

Ridership/Data Collection

Ridership counts are completed by drivers using pre-printed forms. One-way trips are counted as a passenger ride. SCOOT staff compiles and produces comprehensive ridership reports on a regular basis.

Ridership has increased sharply in all customer groups—door-to-door, CalTrain commuters and youth. Door-to-door grew from 291 in Month 1 (November 2002) to 2,238 in Month 13 (November 2003) and to 3,697 in Month 19 (May 2004). For the same time periods, CalTrain commuters increased from 9 (Month 1) to 1,067 (Month 13) and to 1,184 (Month 19). Routes (youth/CalTrain) moved from 844 (Month 1) to 9,517 (Month 13) and to 12,985 (Month 19).

Passenger Feedback

In a survey of 250 riders conducted in May 2003, 82% reported they would pay for shuttle services, ranging from \$1 to \$11+ per week. Of the CalTrain commuters, 41% said they were new CalTrain riders after starting to use SCOOT. Thirty-two percent of CalTrain riders said they ride CalTrain more often than before SCOOT was available. Seventy-six percent of surveyed riders said that they use their vehicles less often. Drivers were rated favorably by survey respondents. Focus groups were also conducted with riders.

A telephone public opinion poll recently conducted by JD Franz Research Inc. found that 94% of San Carlos residents had heard of SCOOT. The survey reported that 79% were very familiar or somewhat familiar with SCOOT's services. Of those who had heard of SCOOT, 32% said they or someone in their household had used SCOOT. Seventy-two percent of SCOOT users said they were very satisfied with the service and another 20 percent said they were somewhat satisfied. Forty-six percent of respondents said they would support a parcel tax to support SCOOT and an additional 19% said they would strongly support such a tax. The most popular parcel tax figure was \$39 per year.

Operating and Cost Data

In FY 03-04, the route service operated for 7,800 service hours at a cost of \$460,000 (reduced to \$342,000 for the current fiscal year). The routes carried 104,500 passengers in the year or 13.4 riders/hour. Cost per rider was \$4.40 and cost/hour was \$58.97.

In FY 03-04, the door-to-door service operated 11,450 service hours at a cost of \$450,000 (reduced to an estimated \$328,000 for the current fiscal year). The routes carried 51,600 passengers in the year or 4.5 riders/hour. Cost per rider was \$8.72 and cost/hour was \$39.50.

Menlo Park Midday Shuttle & Shoppers Shuttle

Service Description

The City of Menlo Park operates the Midday Shuttle and the companion Shopper's Shuttle for residents of the city. The Midday Shuttle was initiated in 1998 with the Shopper's Shuttle beginning the following year.

The Midday Shuttle operates Monday-Friday, 9:30 am to 3:30 am on a fixed route serving senior centers, senior housing, CalTrain, the Stanford Shopping Center, the VA Hospital, downtown Menlo Park and other popular destinations. Seniors are the primary customers with school children also using the shuttle for school field trips. The Midday Shuttle is contracted to the Parking Company of America (PCA) and uses two 20-passenger vehicles.

The Shopper's Shuttle is a door-to-door service for residents living out of the Midday Shuttle service area and operates Wednesday and Friday 10 am to 1:30 pm. Seniors are the primary customers. Riders call the city's Shuttle Coordinator who gives them a hotline

number to use to request a ride for the following day. The driver picks up the hotline messages and constructs the day's route. The Shopper's Shuttle is operated by the city using a 14-passenger van and city-employee driver.

Project Purpose

The primary objective of the service is to provide a community service by improving mobility for seniors and other residents. The original idea for the service came from older citizens who remembered the old "carriage" services that provided community transportation within the city before SamTrans was formed.

Service Impact

The city has received many positive comments from riders who can now get to key Menlo Park destinations very easily. Testimonials have also been received from adult children who are pleased to know their parents are using safe, dependable transportation and won't either be driving or forced to stay home. Ridership increased from 53 riders/day in 2001 to 95/riders per day in 2003.

Opportunities and Constraints

A consultant for the city performed an extensive performance review in 2002, resulting in significant improvements in service and cost. The Midday Shuttle route was re-structured to eliminate unproductive segments and the schedule was changed to 60 minute headways to provide an easy-to-remember "clock schedule." (It was found that seniors liked the new clock schedule and did not mind the 15 minute increase in headways.) New publicity approaches were initiated, driver performance was monitored more closely and rider data collection was improved. As a result, ridership nearly doubled while cost/rider dropped from \$11.34 to \$4.62.

Menlo Park has had an ongoing problem with identifying the shuttle vehicles. In 2002, the city signed and painted vehicles to identify them clearly as the Menlo Park Midday Shuttle. While this has helped, sometimes the vehicles break down or are used elsewhere by the contractor. Similarly, the city has developed its own bus stop signs, but has had little success in getting SamTrans to allow shuttle signs at its stops. Rider data, a problem at a number of shuttle programs, was poor but has now been improved.

The city's shuttle manager position was slated for layoff in mid-2004 and again at the end of 2004. Both times, the layoff notice was canceled, but the uncertainty negatively affected the shuttle manager.

An excellent contractor and good drivers have both been instrumental in the shuttle's success. The shuttle manager believes that quickly responding to customer problems and fixing them has produced considerable good will among riders.

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There is definitely an opportunity for growth in service to seniors. In a 2002 survey of Menlo Park seniors, 36% of respondents said they did not have a car available. While 26% said they had a disability that prevented them from using a SamTrans bus, only 15% reported being registered for SamTrans' Redi-Wheels service. Twenty-five percent of seniors said they were not able to arrange transportation to grocery stores while 41% said they needed transportation to drug stores and 44% needed transportation to inexpensive stores like Wal-Mart and K-Mart.

As in many Bay Area cities, there is an opportunity for the city shuttle program to provide service for school children. The city's two CalTrain shuttles have recently been adapted to provide some middle and high school service, much to the delight of parents. Hotels would also like to have shuttle service.

Interface with SamTrans and other Services

The city reports that Richard Cook, manager of the SamTrans shuttle program, has been very helpful. Getting signage has been the only ongoing problem with CalTrain/SamTrans. The Midday Shuttle is coordinated with SamTrans services and serves the Menlo Park CalTrain station.

Marketing and other Public Information

The shuttle service is marketed through the city newsletter, large banners on city streets and a web page linked to 511.org and the CalTrain/SamTrans web site. Direct mailings are done to residents near the Midday route and in other areas to promote the door-to-door Shopper's Shuttle. Riders with questions and problems can call Debbie Helming, the city's Shuttle Coordinator and/or the contractor.

On-Site Observations

The drivers are courteous and the 2002 performance review found them to be very popular with riders and helpful with packages. Overall, riders said they felt safe. There have been some problems with language barriers making communication difficult. The shuttle vehicles have wheelchair lifts. The seats are comfortable, the windows provide a good view and the vehicles are clean.

Ridership/Data Collection

Rider counts are made by drivers and are recorded on pre-printed forms. The forms are turned into PCA which provides summaries to the city. At the time of the 2002 performance review, there were significant problems with inaccurate rider counts. These were mostly fixed by a set of new procedures and tougher driver monitoring. One-way trips are counted as a passenger ride. Ridership has increased in recent years.

Passenger Feedback

The annual rider survey was not conducted this year due to the impending layoff of the Shuttle Coordinator. Now that the coordinator job has been reinstated, it is expected that a survey designed with BayCAP and CalTrain/SamTrans will be conducted.

Operating and Cost Data

The Midday Shuttle operated for 2,493 service hours in FY 03-04 at a cost of \$119,522. It carried 20,751 passengers. The cost per rider was \$5.76. The cost per hour was \$47.94 and the riders/hour was 8.3.

The Shopper's Shuttle operated for 208 service hours in FY 03-04 at a cost of \$10,862. It carried 434 passengers. The cost per rider was \$25.03. The cost per hour was \$52.22 and the riders/hour was 2.1.

East Palo Alto Senior Shuttle and CalTrain Shuttle

Service Description

The City of East Palo Alto operates two shuttles with C/CAG funding, the Senior Shuttle and the CalTrain Shuttle.

The Senior Shuttle began service on June 14, 2003 and operates three fixed routes between senior housing and the senior center, medical facilities and shopping districts. Monday and Thursday, the shuttle operates 10 am to 3 pm to Albertsons Palo Alto, downtown Palo Alto, Stanford Shopping Center and Stanford Medical Center. The shuttle makes morning and midday pickups at the senior center and housing areas. Key destinations are served 2-4 times each day. Tuesday and Friday the shuttle runs 10 am to 3:15 pm to Sequoia Station, Kaiser Hospital, K-Mart and Foods Co. The shuttle makes morning, midday and early afternoon pickups and serves each destination three times. Wednesday the shuttle operates 10 am to 1:50 pm to Albertsons San Antonio Center, Sears Mountain View and Wal-Mart Mountain View with a morning pickup and two stops at each destination. The Senior Shuttle is contracted to Parking Company of America (PCA) and uses a 20-passenger LIFT-equipped vehicle.

The CalTrain Shuttle used C/CAG funding in June 2003 to add a 4th weekday morning trip and to initiate weekend service on an existing fixed route between CalTrain and key points in East Palo Alto. The shuttle serves CalTrain, Senior Center, Palo Alto Park, Kavanaugh Neighborhood, University Village, Health Clinic and Free at Last, EPA Gardens and the Newell Road/West Bayshore area. The extra weekday trip extends service to 9:30 am (previously stopped at 8:45 am). The weekend service makes three morning trips and three late afternoon/early evening trips each Saturday and Sunday. Saturday service runs 7:15 to 10:05 am and 4:15 to 7:05 pm. Sunday service operates 8:40 to 11:30 am and 5:15 to 8:05 pm. The CalTrain Shuttle is contracted to Parking Company of America (PCA) and uses a 20-passenger LIFT-equipped vehicle.

Project Purpose

The primary objective of the Senior Shuttle is to make it easier for seniors who do not have access to vehicles or who cannot drive to do grocery shopping, make doctor visits and meet other shopping needs. A secondary objective is to persuade seniors who have cars to drive less or not at all.

The primary objectives of the CalTrain Shuttle service extension are to give East Palo Alto residents better public transit access to CalTrain and within EPA on Saturdays and Sundays and to improve weekday morning access to CalTrain.

Service Impact

The Senior Shuttle has improved mobility for seniors in East Palo Alto by providing shuttle service that takes them more directly to their destinations. Existing public transit service in the area often required transfers and longer trip times. As a free service, it has provided low-income residents with more affordable public transit to critical destinations such as medical services and grocery stores. Perhaps most importantly, it has allowed seniors to feel safer on public transportation that includes only other older adults. Ridership has been lower than projected, but it has increased steadily from 322 in the 3rd quarter of 2003 (start of service) to 527 in the 1st quarter of 2004 to 648 in the 3rd quarter of 2004.

The CalTrain Shuttle has significantly improved weekend access to CalTrain and has enhanced weekday morning service. The weekend service has grown from 479 in the 3rd quarter of 2003 to 1,364 in the 1st quarter of 2004 and leveled off at 1,335 in the 3rd quarter of 2004. The extra weekday morning trip has grown from 370 in the 3rd quarter of 2003 to 719 in the 1st quarter of 2004 and to 828 in the 3rd quarter of 2004.

Opportunities and Constraints

East Palo Alto staff reports that seniors have requested greater frequency of service for the Senior Shuttle, complaining that they have to wait too long for the service to come back around and pick them up. As a result of this (and possibly other factors) the Senior Shuttle has not attracted the number of riders projected in the funding application. East Palo Alto projected 7,344 annual riders (612/month) but FY 03-04 reached only 1,964 (163/month). In the first four months of FY 04-05 that figure improved to 213/month. Low ridership has created high per rider costs. East Palo Alto is considering increased frequencies perhaps in conjunction with neighboring Menlo Park.

There is certainly an opportunity to increase Senior Shuttle ridership. A survey of seniors conducted in 2003 (in conjunction with Menlo Park) found that 43% did not have a car available. Thirty-seven percent reported having a disability that prevented them from using a SamTrans bus, but only 16% were registered for Redi-Wheels service. Forty-five percent reported they were unable to arrange transportation to grocery stores, 67% need transportation to "inexpensive" stores and 58% need transportation to drug stores.

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The extended CalTrain Shuttle weekday morning and weekend service has come much closer to projected ridership levels. The service is one of the few successful home-end shuttles in the Bay Area and should serve as a model for other low-income communities who need to be linked more directly to mainline trains and buses.

The shuttles need to have bilingual drivers. While PCA provides some drivers who speak Spanish and English, language barriers still make customer service difficult at times.

The main opportunity for East Palo Alto is the future implementation of the recently completed Community Based Transportation Plan. Securing funding to implement the plan's recommendations will be essential to improving the shuttle program and enhancing residents' mobility.

The city has just been awarded two new MTC LIFT grants for new shuttle services. One shuttle will expand service to CalTrain and new job centers. The other will provide on-demand shuttle services for youth to reach employment sites. The city has received a \$700,000 JARC grant which is being used to match LIFT funding. At the same time, MTC turned down the city's LIFT request for a mobility manager. Since limited staff time appears to already be a significant barrier to successful shuttles in East Palo Alto, the lack of a dedicated mobility manager will likely prove to be even more critical in the next year.

City staff report that they are very interested in partnerships with the Alliance, Menlo Park, Stanford and Palo Alto to improve services for their residents.

Interface with SamTrans and other Services

The CalTrain Shuttle connects with CalTrain, VTA buses, SamTrans buses, the Stanford Marguerite Shuttle and the Dumbarton Express at the Palo Alto Transit Center. Five SamTrans routes serve East Palo Alto. The 280, 281 and 296 provide weekday day and evening services plus daytime service on weekends. The 297 and 397 provide more limited service.

East Palo Alto staff state that SamTrans has been supportive of the shuttle system. SamTrans led the recent Community Based Transportation Plan process in which the city participated. Schedules for the shuttles have been coordinated with CalTrain and SamTrans schedules.

Marketing and other Public Information

The shuttles are marketed through the city web pages, links to the CalTrain web page, route maps and schedules at key locations and through work with community advisory committees. All materials list the Public Works Department's phone number for suggestions and questions.

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Ridership/Data Collection

Rider counts are made by drivers, recorded on pre-printed forms and turned into PCA which summarizes and provides to the city. Each one-way trip is counted as a passenger ride.

Passenger Feedback

Seniors were extensively consulted through the surveying process in 2003 for the design of the service. Considerable feedback on residents' transportation needs was collected through the recent Community Based Transportation Plan process.

Operating and Cost Data

The Senior Shuttle operated for 1,877 service hours in FY 03-04 with a total cost of \$70,170. The shuttle carried 1,964 riders. The cost per rider was \$35.73. The cost per hour was \$37.38. The number of riders per hour was 1.04.

The CalTrain Shuttle extended morning and weekend service operated for 879 service hours in FY 03-04 at a cost of \$46,780. The shuttle carried 6,949 riders. The cost per rider was \$6.73. The cost per hour was \$53.22. The number of riders per hour was 7.9.

Figure 2-6 Shuttle Service Summary Overview

Operating Characteristics	Midbay Senior Shuttle	North Redwood Shuttle	Fraser City (Connections)	San Carlos (SCL007)	Mobile Park	East Palo Alto
Service Type (Fed Rte, DAR)	Senior Door-to-Door DAR	Student and Hospital Shuttle Fixed Route	Midday Shuttle (2 Routes) Fixed Route	Youth/Caltrain Routes Fixed Route	Shoppers Shuttle DAR	Senior Shuttle Fixed Route
Brief Description	Door-to-door service for seniors within the Midbay and other select destinations	Connects Caltrain and BART to Mary High School and Mills Hospital	Red Line follows San Bruno 251. Bus line connects residential areas.	9 routes connecting homes, schools, after-school activities and Caltrain	Door-to-door serving seniors not living on Midway route	3 different routes on different days (MTW, TTF, W) to key senior destinations
Days and Hours of Operation	M-F, 8am-3pm	M-F, 6:30am-3:30pm	M-F, 9:30am-3:30pm	M-F morning and mid-afternoon	M-F 9:30 am - 3:30 pm	M, T, Th, F 10 am - 3 pm; Weds 10 am - 2 pm
Contracted Service or In-House Operation	Operated in-house with city driver and city vehicle	Operations Contracted to PCA	Operations Contracted to Sereedjity	Operations Contracted to Sereedjity; Vehicles leased from separate vendor	Contracted to PCA	Contracted to PCA
Vehicle Information (Vehicle Type, owned or contractor supplied)	City owned vehicle, 16 passenger van with space for 4 wheelchairs. Lift Equipped.	Econoline 950 Powerstroke van, diesel fueled, no wheelchair lift	Champion Diesel Bus. Seats 18 passengers with space for 1 wheelchair	924-pass gasoline vehicles with lift	2 20-pass diesel outways with lifts	20-pass (US) diesel outways with lifts
Primary Users of the Service	Seniors	Students, family and hospital staff	Students, seniors	Students, teachers, parents, commuters	Seniors, commuters, other residents	Seniors
Annual Ridership	2,835	8,243	40,508	105,000	61,663	1864
Major Trip Purposes/Destinations	Shopping within Millbrae, medical appointments, scenic drives	Connecting passengers from Intermodal Station to Mary High School, Mills Hospital	Shopping, school, transportation hubs	Home school routes (all grades); After-school to Youth Ctr, library, parks and homes; Also service to Caltrain	Senior needs, shopping, Caltrain, hospitals, Safeway	To key shopping and medical destinations
Funding Sources	FTA 5310 funds, AEA, CIGAG, user fees	City contribution: \$23,560; and Mary HS: \$4,000; Mills Hosp: \$6,000; CIGAG/Seniors: \$33,560	CIGAG: \$32,500; CIGAG One Time Congestion Relief Grant: \$27,950; and General Funds: \$4,550	03-04: CIGAG: \$228,000; TPCA 126,000; Measure A: \$438,713; Gas Tax: \$184,000; City general fund \$18,482; Rentals: \$2,400-0405 CIGAG, TPCA, Measure A	Redesignated Agency \$50,000; TPCA \$30,732; Local transportation \$40,403	CIGAG \$23,300; Measure A \$23,390

Notes:
Funding Sources for Midbay and North Redwood are based on FY 2003-04.
Funding Sources for Fraser City based on FY2004-05

Figure 2-7 Operating and Cost Statistics

Operating Data	Western Senior Shuttle	North Burlington Shuttle	Frederic City (Connections)	San Carlos (SCOUT)	Memo Park	East Palo Alto
		Student and Hospital Shuttle	Midway Shuttle (2 Routes)	Yonkers Shuttle	Shoppers Shuttle	Senior Shuttle
	Senior Door-to-Door			Door-to-Door		
Total Operating Costs	\$23,518	\$87,120	\$99,794	\$450,000	\$119,522	\$70,170
Breakdown of Operating Costs						
Contractor Cost	\$0	\$87,120	\$97,521	\$385,071	\$116,718	
In House Cost	\$18,931			\$65,379	\$2,804	\$46,780
Maintenance Cost	\$1,899	Included in contract	Included in contract	\$16,007	Performed by city	Included in contract
Fuel	\$2,568	Included in contract	Included in contract	\$13,144	Provided by city	Included in contract
Insurance	City Insured	Contractor carries own	Contractor carries own	Contractor carries own	City Insured	Included in contract
Administrative Costs (Personnel expenses)	does not charge administrative costs to service	does not charge administrative costs to service	does not charge administrative costs to service	\$28,584	Included in hours for Midway. Not charged.	does not charge administrative costs to service
Other Direct Costs (printing, marketing materials, promotions, etc)	\$0	\$0	\$2,273.57	\$8,113	249	0
Vehicle Service Hours (annual)	1,440	1530	3,074	\$11,450	208	1,877
Passenger (annual)	2836	8,243	40,696	51,600	434	1,904
Performance Indicators						
Cost/Passenger	\$8.29	\$8.14	\$2.45	\$8.72	\$5.76	\$35.73
Cost/Hour	\$16.33	\$43.87	\$33.90	\$39.30	\$27.22	\$37.38
Passenger/Hour	2.0	5.4	13.5	4.5	2.1	1.0

All figures are based on FY 2003/04 unless otherwise noted.

Chapter 3. Best Practices

Each of the six C/CAG-funded shuttle programs has developed innovative strategies that could benefit other shuttle operators. This chapter presents a short summary of these “best practices.” For more information, contact the shuttle program manager listed in Appendix E.

E-mail and Telephone Hotlines

SCOOT uses e-mail and telephone hotlines to actively solicit feedback, questions, suggestions and criticism from customers and potential customers. Each city wants feedback but SCOOT makes it so easy for customers to talk to them. The result is both program improvement and an e-mail list of interested citizens.

A Catchy Name

The full name is difficult—San Carlos Optimum Operational Transit—but “S.C.O.O.T” is friendly, easy to remember and paints a great picture of a fast shuttle service. Is it any wonder that 94% of San Carlos residents in a recent telephone poll said they recognized the name? Foster City also has a catchy name – Foster City Connections. It tells what the service does – connects residents with activities and services in Foster City. Public transit doesn’t have to be dull! (The original name for the U.C. Berkeley shuttle was Humphrey-Go-BART.)

Fast Response

When Menlo Park parents yelled “help!” for school transportation for their kids, the city’s shuttle coordinator jumped. In a week, she not only designed a school route add-on to their existing CalTrain (employee) shuttle, but she got the new service up and running! Lesson 1A in building public support for your program is fast response.

Easy Shuttle Schedules

Menlo Park’s Midday Shuttle ran on 45 minute “headways” (the time between buses) so seniors often had to look up their departure times. Solution: The city switched to a “clock schedule” with 60-minute headways so the shuttle now comes to a stop at the same time each hour. Seniors, it turned out, didn’t mind the extra 15 minutes between shuttles and they loved the new simple schedule.

A Program Overhaul

Menlo Park’s Midday Shuttle needed a tune-up in 2002. Ridership was below expectations and costs were increasing. So, the city brought in an outside consultant with great expertise in shuttle operations. Working with shuttle staff, the consultant designed service and marketing improvements that nearly doubled ridership while reducing annual costs by twenty percent. Shuttle program managers, by necessity, often spend most of their time just keeping the service running. Getting outside help can sometimes make all the difference.

Successful Residential Service

Nearly all of the 150+ shuttles in the Bay Area are on the “work-end” of the trip, taking riders from train stations to their nearby jobs, schools, etc. East Palo Alto, however, has succeeded with a “home-end” service, transporting EPA residents from their homes to the Palo Alto Transit Center (CalTrain, VTA, SamTrans, Stanford shuttles). Ridership is increasing steadily.

Weekend Shuttles

East Palo Alto also gets “kudos” for expanding its successful AM/PM weekday CalTrain shuttle to Saturday and Sundays. Now, EPA residents can get to CalTrain and other “mainline” transit services 7 days a week. Customer loads, while below the Monday-Friday levels, are quite good and they are rising.

Making a Difference

SCOOT, like many programs, collects data on its shuttle and creates monthly ridership reports. SCOOT, however, smartly goes further to measure actual impacts on San Carlos. They have measured things like “level of service” at key intersections (improving) and Youth Center attendance (increasing) to show their community that everyone is benefiting from the SCOOT service, not just riders. SCOOT is not only making itself a vital part of the community, it is making sure that the public (voters!) get the picture.

Schedule Coordination

Foster City isn’t just running its own shuttle, it is working closely with SamTrans to coordinate schedules of SamTrans Route 251 with the Red Line shuttle route. In this way, 30-minute headways have been maintained in an area where SamTrans has had to cut back to 60-minute intervals. “Public transit” and “local transit” working together in a coordinated fashion to deliver frequent service to customers (who deserve a seamless transit system).

Speaking the Language

Foster City and East Palo Alto are meeting local community needs and adding riders by publicizing shuttle and transit information in Cantonese (Foster City) and Spanish (East Palo Alto). Schedules and flyers can attract riders and bi-lingual drivers can all make that vital customer link.

Drivers Are the Public Face

The driver of the Millbrae senior shuttle service is on a first name basis with passengers, assists them with packages and has earned their trust. This highly personalized service with a high level of trust is an essential ingredient for a successful senior service.

Less is More

Millbrae is appropriately considering scaling back service to three days a week as one cost savings option. This will allow the city more time to build ridership and fill in excess capacity. Finding the right fit between shuttle needs and shuttle services is key to a cost-efficient operation.

Staying Late

The City of Burlingame and the Alliance have made great efforts to accommodate after-school student activities to attract students to use the service to/from school. Running the shuttle until 6 pm has allowed students to take part in after-school efforts and still take public transit.

Let's Talk

Foster City's Connection has shown a rapid response to complaints about overcrowding on one of its routes that serves middle school students. While the City recognizes it can't "fix" the problem right now, it has taken the initiative to communicate directly with both schools and parents and about the problems and possible alternatives for students.

Knowing the Customer

Excellent work—surveys, focus groups, etc.—to better understand customers and potential customers has been done by Foster City, San Carlos, Menlo Park and East Palo Alto. Good customer knowledge is the foundation of a strong program.

Get Others to Help Market the Service

North Burlingame has worked closely with Mercy High School to help market the service to both students and faculty alike. The school has issued flyers to students and faculty, sent home notices to parents, and publicized articles in school publications. This demonstrates a real partnership and has paid off in terms of Mercy High School ridership.

Chapter 4. Recommended Service Standards

This chapter provides an overview of service performance and design standards for local services in San Mateo County addressing both fixed route and door-to-door shuttle services. Performance and service design standards are critical to the management, evaluation and planning of public transit and shuttle services. Standards provide benchmarks for service performance and a blueprint for how service should be operated and designed.

Value of Performance and Design Standards

Monitoring system performance and designing the “right” services are important steps in developing an effective and community responsive local shuttle program. Service standards should:

- Reflect and support community goals for local and regional transit services. *Goals, objectives and policies provide a “foundation” for transit service, whereas standards provide a formal, quantifiable structure for how the service should perform and be implemented.*
- Ensure compliance with all applicable federal, state and local regulatory requirements. *Are the services operated within the law?*
- Facilitate simple, straightforward service evaluation. *Can the services be monitored and evaluated with the existing staff resources and technology?*
- Provide a clear rationale for service increases (increased frequency or service span), service expansion (route extensions or new routes to areas not currently served) and service cut backs. (what services should be reduced when budgets are cut or scaled back). *Service standards help staff and management justify critical decisions affecting service delivery.*
- Provide criteria for the design and operation of safe and effective shuttle service. *How should new service be introduced, coordinated with existing service and how should services be operated?*

While specific standards can vary, local shuttle services should be limited to a small number of standards that can be reasonably monitored and fall into the following categories:

1. Efficiency and service quality standards
2. Service design standards.

Recommended Efficiency Standards

Efficiency standards use operational data to measure transit performance. Monitoring operational efficiency and productivity requires data such as operating cost, vehicle revenue miles, vehicle revenue hours and boardings (passenger trips). Data should be collected for an overall shuttle program, and for individual routes to evaluate performance at the route level for planning and evaluation purposes.

We recognize that local services do not have the staff resources to collect and analyze a wealth of data. For this reason, we have limited our recommended efficiency performance standards to three key indicators that will give the Cities and C/CAC a good understanding of how well the local services are doing. Recommended efficiency performance measures for fixed route and dial-a-ride services include the following:

- **Operating Cost per Passenger:** This measure is calculated by dividing all operating costs by total passengers. This includes contract costs (if applicable), maintenance, insurance, fuel and administrative costs. In reality, many of the local programs do not charge personnel or administrative costs to the service. Operating costs and passenger data should be maintained separately for each route to be able to calculate operating cost per passenger at the route and system level. Being able to assess a route-by-route measure is useful when service cuts or enhancements are being considered and justified.
- **Operating Cost per Revenue Hour:** This measure is calculated by dividing all operating costs (defined above) by the total number of vehicle service hours (defined as time when the vehicle is actually in passenger service). Operating cost per revenue hour measures service efficiency and should be tracked on a quarterly and annual basis. A benchmark standard should be established prior to the beginning of each fiscal year based on realistic projections of anticipated budget costs.
- **Passengers per Revenue Hour:** Passengers per revenue hour is calculated by dividing the total number of passengers by the total number of vehicle service hours. The number of passengers per hour is a good measure of service productivity and valuable in establishing design standards. Passengers per revenue hour should be calculated for each route.

Figure 4-1 presents a summary of proposed local shuttle service performance standards for fixed route and door-to-door service. We have recommended a numeric value for these standards based on current performance of the six programs in San Mateo County and our experience with other shuttle programs throughout the Bay Area.

**Figure 4-1 Local Shuttle Service Performance Standards
Fixed Route and Door-to-Door Service**

Performance Standard	Benchmark	Comments
Operating Cost/ Passenger	The fixed route operating cost/passenger should not exceed \$6.00. The door-to-door operating cost/passenger should not exceed \$15.00.	Established in advance for each fiscal year. A higher cost/passenger trip for door-to-door services should be expected because of lower anticipated productivity (few passengers carried per hour).
Operating Cost/ Revenue Hour	The annual operating cost/revenue hour should not exceed \$50.00.	Established for each fiscal year. The operating cost/revenue hour should be consistent for all service types because of consistent hourly operator rates.
Passengers/ Revenue Hour	Passengers/revenue hour for fixed route service systemwide should meet a minimum of 10-passengers/revenue hour. Passengers/revenue hour for door-to-door service should meet a minimum of 2-passengers/ revenue hour.	A fixed route service should be expected to carry more passengers per hour than a door-to-door service.

A standard report format in excel format for these three indicators is presented in Appendix D. It provides an easy-to-use format for the Cities to drop in their data on a quarterly basis with formulas in place to automatically calculate the performance indicators and cumulative year-to-date data.

The value in tracking and monitoring this data on a quarterly basis is to assess performance on an ongoing basis rather than waiting for a complete years worth of data. Both local city managers and C/CAG will have the opportunity to review performance, and follow up with an appropriate, mid-year process to address services that are not performing up to standard. C/CAG is encouraged to work closely with the local programs to develop an action plan for services falling below standard such as implementing service or schedule changes, service level reductions, focused marketing efforts or other steps to be determined by the city and C/CAG.

Recommended Service Design Standards

Service design standards are valuable to help plan for and set priorities for expanding service to new areas and potential markets, and to guide how the service will be delivered. Transit design standards are focused on fixed route service and incorporate a mix of interrelated social, political and economic factors. Generally they include:

- Individual City's goals, and objectives for local shuttle service.
- The marketability of the service(s) to be provided.

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- Environmental and energy issues.
- Available technology.
- Budget limitations.
- Land use constraints and right-of-way design characteristics and limitations.

Recommended design service standards for local fixed route shuttle services are presented in Figure 4-2.

Figure 4-2 Fixed Route Service Design Standards

Standard	Benchmark/Criteria
Introduction of New Service	<p>This can include the introduction of a new route, the expansion of an existing route, and an increase in service frequency.</p> <p>New service should be introduced if anticipated hourly productivity will meet the productivity performance standard established for the service.²</p> <p>New service should be operated on a trial basis for up to 12 months to allow ridership to develop.</p>
Minimum Bus Stop Design	<p>All bus stops should be clearly marked with proper signage including the designated route number(s).</p> <p>Priority should be given to bus stops serving senior apartments or activity centers and group residences designed for persons with disabilities.</p>
Timed Transfers	<p>Shuttle service schedules should be designed to ensure timed transfers between routes and with regional carriers. This requires coordination with SamTrans, CalTrain and BART.</p>
Clock Face Headways	<p>Clock face schedules require frequencies that divide evenly into 60 minutes – 5, 10, 15, 20, 30 and 60-minute frequencies.</p>

Conclusion

The recommended performance and design standards should support the shuttle services of the Local Transportation Service Program. Performance standards will have to be adjusted as operating costs change from year to year and protocols will have to be established for the ongoing tracking and the timely evaluation of service performance. Design standards for new or revised fixed route services may have to be revisited from time to time as transit goals and priorities within each community change.

While the three recommended performance standards provide a framework for managing, tracking and evaluating services, they should not be considered as “carved in stone.” Standards must be revisited and updated as operating conditions and community priorities change.

² New service should be introduced to a residential neighborhood, school or business park when the projected demand will meet the minimum passengers/revenue hour and farebox recovery standards. Demand can be calculated by multiplying the population within ¼ mile of the proposed service by a daily per capita trip rate. Hourly productivity can then be calculated by dividing demand by the number of planned revenue hours.

Chapter 5. Findings and Recommendations

This chapter describes the major findings and conclusions of the shuttle service evaluation and presents a series of recommendations designed to further improve their effectiveness.

Major Findings

- Each shuttle program serves an important community need serving senior citizens, students, and other local residents. Users value the service; ride the bus on a regular basis and in some cases would have no other means of travel if it were not available.
- All of the programs share common objectives of reducing local traffic congestion, increasing mobility for seniors, youth and serving regional carriers (CalTrain and SamTrans), although each program is unique in service design and delivery.
- The majority of services are operated by a private vendor with only two of the shuttles operated with in-house city employees.
- All of the services are free of charge with the exception of the Millbrae Senior Shuttle, which has a unique fare structure, charging passengers based on their trip purpose.
- Annual operating costs vary widely from less than \$12,000 per year for the Shoppers Shuttle in Menlo Park, which operates very hours, to SCOOT's door-to-door service at \$450,000 per year providing over 11,000 annual service hours.
- The cost effectiveness of the programs show wide fluctuation in terms of cost per passenger and cost per hour. For example, the hourly cost of the Foster City Connections is \$33.00 whereas the East Palo Alto residential shuttle operates at approximately \$53.00 per hour. In contrast, a door-to-door service is expected to have higher costs per passenger than a fixed route service because of its personalized nature. The per passenger costs of the Millbrae Senior Shuttle and the San Carlos door-to-door shuttle are \$8.29 and \$8.72 respectively compared to approximately \$6.00 per passenger costs on the Menlo Park shuttle.
- Each program follows the C/CAG guidelines and devotes in-kind services and staff time to the programs. The amount of staff time devoted to the services varies depending on the size of the program. None of the programs break out administrative costs to the service with the exception of San Carlos, which has the most extensive shuttle program of all the cities.

- Data collection and record keeping are not consistent between programs and the quality varies. Monitoring and tracking service performance is conducted intermittently with no consistent approach to service evaluation between the programs.
- Marketing and public information also varies by program. Some programs have devoted considerable effort to marketing services and have attractive marketing materials while others have not considered this a high priority.

Recommendations for Program Improvements

1. Monitor service on a quarterly basis and require each under performing service to develop an improvement plan.

The evaluation revealed that not all of the services are routinely assessing their performance nor are they consistently submitting invoices and progress reports to C/CAG. As a result, some of the services have been operating for over one year without a good understanding of how well they are doing, or if they are performing within expectations.

The major purpose of this recommendation is for individual cities, in cooperation with C/CAG, to review performance on a quarterly basis and develop a course of action for services that are under-performing or do not meet performance expectations (refer to recommended performance standards outlined in Chapter 4, and report format in Appendix D). The intent is not to penalize a program or service, but to take joint corrective action mid-year, if necessary, to try to bring service more in compliance with expectations, whether it is to increase lower than anticipated ridership or minimize operating costs. A shuttle service, especially service that is new to a community, requires on-going monitoring and refinements to be responsive to community needs.

2. Conduct periodic counts by an outside party to check reported results.

There is ample evidence that ridership counts are difficult to conduct and in some cases, are not always done or are completely accurate. It can be challenging for drivers to safely drive the bus, answer passenger questions and record ridership and other data. For this reason, we are recommending that C/CAG consider retaining an outside party to conduct ridership counts on an annual basis. This will ensure that all ridership data is collected and tabulated in the same manner. Ridership counts could be collected on a typical weekday and could also include collection of other valuable data such as on-time performance, peak loads, and other information that may be of value to the cities.

3. Work with SamTrans and shuttle operators to create a standard approach to scheduling, instead of each program developing their own.

Good printed schedules for customers are difficult to design and the quality varies between programs, with some being high quality and others are a challenge to understand. A standard schedule template that could be modified to meet local needs could be very helpful to individual programs.

4. Create signage for all vehicles and ensure proper street signage.

All shuttle vehicles are not clearly and attractively marked and they can be hard to identify on the street. The vehicle itself markets the service so it is important that the vehicle have its name and logo prominently displayed and that it be attractively painted to attract attention to the service.

Another element of marketing "on the street" is to ensure proper signage at stations and at bus stops. Without such information, services are missing an important marketing opportunity. C/CAG and the cities are encouraged to cooperatively work together to get SamTrans and CalTrain to provide current and appropriate marked signage.

5. Develop a forum for program managers to regularly meet to share marketing successes and operational issues.

Each shuttle program assumes responsibility for marketing their services. We know from experience with other shuttle programs that strong marketing campaigns are important for gaining public support and recognition. Some managers are strong marketers and others rely on the professional services of the Peninsula Traffic Congestion Relief Alliance. Others do not have a strong background or interest in marketing. Marketing is often not given the attention it deserves because of the enormous responsibilities associated with day-to-day operational issues. For this reason, we believe it would be valuable for C/CAG and the cities to meet on a periodic basis to discuss marketing experiences, operational problems, and other issues to learn from each other, generate ideas and share "lessons learned." It may be worthwhile to bring in outside experts such as SamTrans staff or outside firms and/or solicit ideas from the Bay CAP regional shuttle group. This type of forum acknowledges that program managers typically have other duties besides shuttle service management and could benefit from an informal group to provide support, generate new ideas and approach problem solving in a group setting.

6. Require shuttle programs to collect rider information on an annual basis and report it to C/CAG.

Rider feedback is not regularly solicited and collected on some shuttles. As part of this evaluation, the consulting team reviewed recently completed ridership surveys and administered a passenger survey on Foster City's two shuttle routes. This information was invaluable.

As part of an ongoing evaluation process, it can be beneficial to obtain direct passenger feedback to supplement the quantitative evaluation. This could take the form of on-board passenger surveys conducted on an annual basis. These need not be difficult to administer because drivers could distribute them to passengers who would fill them out while riding the bus. The surveys need not be lengthy and should be available in alternative languages to ensure all riders have access to them. C/CAG could provide a standard survey that could be used by all programs that could be modified as appropriate by the individual programs to meet their unique needs.

APPENDIX A

INTERVIEW GUIDE

EVALUATION OF THE LOCAL SERVICE PROGRAM Interview Worksheet

The questions below will be the focus of our meeting with you. Please feel free to write notes on this worksheet.

Please note:

If you are operating more than one shuttle with C/CAG Local Service Program funding, we need all of the following information for each shuttle. Cost and ridership data should be provided in electronic form at if possible.

City:

Contact Name:

Shuttle Name:

Please describe your service:

- What are the major destinations of the shuttle? (hospitals, high school, employers, senior centers, etc?)

- How does the shuttle operate? Fixed-route? Door-to-door? Other?

- Days and hours of operation?

- Who are the primary users of this service and what are their trip purposes?

- Vehicle Fleet
 - Contractor provides vehicles?
 - Number and type of vehicles?

- Contractor Name, Contact and Telephone No:

Project purpose/problems/plans:

- When did the shuttle start service?
- What are the three primary reasons the shuttle service was initiated?
- Has the service changed from its original plan? If yes, please explain.
- What impact has the service had on the original problem (i.e., addressed the rationale for starting up the service?)
- What are the biggest problems you have run into with your shuttle? How are they being addressed?
- What plans do you have for changing or improving the service in the future?
- Are there plans in your community (such as new high school, major new employer, or other) that will impact the service or require you to make future changes?

Written information we need:

Service Cost and Ridership

- Please provide operating cost data for 2003-year end and year-to-date costs for 2004. Ideally, cost data should be presented as follows:
 - Contractor costs (day-to-day operations)
 - Fuel *may be included in your contractor costs*
 - Insurance *may be included in your contractor costs*
 - Administration costs *City staff charges to oversee/administer service*
 - Other costs *please specify (marketing, etc)*
- Please provide ridership data for 2003-year end and year-to-date ridership data for 2004. Ideally, ridership data should be presented as follows:
 - Total Ridership by Year
 - Ridership by type (disabled, student, etc)
 - Wheelchairs Users (if available)
- Have you conducted any surveys or other data collection about your riders? If yes, please explain and provide copies of the results.
- Do you have yearly or quarterly reports on the service that were presented to your City Council? If yes, can we get copies of them please.

Funding

- Please provide a list all the funding sources and the amount of each source that are used to pay for the service. This information is needed for 2004 and 2003.

Contracts

- Please provide a copy of your contract agreement.

Materials:

- Please provide copies of any flyers, brochures or other material about the service

Other Information

- Is there any other information that you want to share about your service?
- Is there someone else at the City or another "stakeholder" that we should interview to further understand the service?
- Who within the City should we contact to get mapping information (GIS Department, etc)?
- We would like to ride on your shuttle to observe operations, talk with riders, etc. during the week of November 8th or 15th. How should we set this up? With you? With your contractor?

APPENDIX B

ON-SITE SHUTTLE OBSERVATION

C/CAG Shuttle Evaluation
On-Site Shuttle Observation

How are drivers collecting and recording ridership information?

Are the vehicles lift-equipped? YES NO

What "best practices" are observed that could be useful to other shuttle programs?

What is the quality of the rider's experience?

- Space/Crowding
- Ease of entry and exit
- Seat comfort
- Room for bags, carts, etc.
- Temperature
- Ability to see out
- Stop announcements
- Driver manner/friendliness
- Other _____

Rider Feedback

Option A: Written survey

Work with shuttle manager to distribute and collect surveys by November 24.

Option B: On-Shuttle rider interviews

- How has this shuttle helped you?
- If this service were not available, how would you make this trip?
- What do you like the most about this shuttle?
- What ONE improvement would you most like to see?

APPENDIX C

SURVEY FORM



Name of Service _____

Date _____

TRANSIT RIDER SURVEY

The City/County Association of Governments of San Mateo County is conducting a brief survey of shuttle services. Your responses are very important for planning services and making improvements to the existing service.

Please complete this survey while you are on the bus and return the form in the COMPLETED SURVEYS envelope. Your answers are completely confidential.

1. What is the purpose of this trip?

- | | |
|---|---|
| <input type="checkbox"/> 1 Work | <input type="checkbox"/> 4 School/College <i>Name of School</i> _____ |
| <input type="checkbox"/> 2 Shopping | <input type="checkbox"/> 5 Medical/Dental |
| <input type="checkbox"/> 3 Recreation (hotel, sports event, restaurant, etc.) | <input type="checkbox"/> 6 Other (Please specify) _____ |

2. How often do you ride this shuttle service?

- ☐1 5 or more trips per week
☐2 2-4 trips per week
☐3 1 trip per week
☐4 Less than 1 trip per week
☐5 First time

3. If this service were not available, how would you make this trip?

- | | |
|---|---|
| <input type="checkbox"/> 1 Drive alone | <input type="checkbox"/> 5 Take another bus <i>Which route?</i> _____ |
| <input type="checkbox"/> 2 Someone would drive me | <input type="checkbox"/> 6 Bike |
| <input type="checkbox"/> 3 Taxi | <input type="checkbox"/> 7 I would not be able to make this trip |
| <input type="checkbox"/> 4 Walk | <input type="checkbox"/> 8 Other |

4. What ONE improvement would you most like to see?

- | | |
|--|---|
| <input type="checkbox"/> 1 Buses operate more frequently | <input type="checkbox"/> 4 Service to _____ |
| <input type="checkbox"/> 2 Buses run longer hours | <input type="checkbox"/> 5 Better transfer connections to _____ |
| <input type="checkbox"/> 3 Benches and shelters at bus stops | <input type="checkbox"/> 6 Other (Please specify) _____ |

5. What do you like the most about this shuttle?

APPENDIX D

STANDARD REPORT TEMPLATE

Appendix D

The purpose of the Standard Report Template is to ensure that reported data is consistent and standardized across all shuttle programs. The template is designed in Excel format to give agencies an easy-to-use tool to report on the performance of their shuttle program. The reports can be submitted electronically to C/CAG for hassle-free submission.

The template has four worksheets. Each worksheet represents one quarter, with a cumulative, year to date column. The fourth quarter worksheet has a column that indicates the program's year-end total.

The lightly shaded fields are the data that agencies need to enter; essentially agencies need to track and report operating cost, vehicle service hours, and passengers served. Once this data is entered, the performance measures are automatically calculated. The cumulative totals are generated automatically once agencies have entered their quarterly data.

C/CAG can use these reports to compare the performance of each program either by quarter and by year and compare the performance indicators with the recommended performance standards.

Standard Report Template

<u>Operating Data</u>	<u>First Quarter</u>		<u>Cumulative YTD</u>
	Blue Line	Red Line	
Total Operating Costs	\$28,250	\$24,800	\$53,050
Contractor Cost	\$0	\$0	\$0
In House Cost	\$22,000	\$17,500	\$39,500
Maintenance Cost	\$2,500	\$1,250	\$3,750
Fuel	\$3,000	\$2,200	\$5,200
Insurance	\$0	\$0	\$0
Administrative Costs (Personnel expenses)	\$0	\$0	\$0
Other Direct Costs (printing marketing materials, promotions, etc)	\$750	\$750	\$1,500
Vehicle Service Hours	1,500	1,100	2,250
Passengers	5,500	2,000	5,500
Performance Indicators			
Operating Cost/Passenger	\$8.07	\$12.40	\$9.65
Operating Cost/Hour	\$18.83	\$22.55	\$23.58
Passengers/Revenue Hour	2.3	1.8	2.4

Standard Report Template

Operating Data	Second Quarter		Cumulative YTD
	Blue Line	Red Line	
Total Operating Costs	\$26,250	\$23,450	\$102,750
			\$0
Contractor Cost	\$0	\$0	\$0
In House Cost	\$21,750	\$16,500	\$77,750
Maintenance Cost	\$1,500	\$1,150	\$6,400
Fuel	\$2,500	\$2,200	\$9,900
Insurance	\$0	\$0	\$0
Administrative Costs (Personnel expenses)	\$0	\$0	\$0
Other Direct Costs (printing marketing materials, promotions,	\$600	\$500	\$2,500
Vehicle Service Hours	1,500	1,100	\$4,850
Passengers	3,500	2,000	\$11,000
Performance Indicators			
Operating Cost/Passenger	\$7.50	\$11.73	\$9.34
Operating Cost/Hour	\$17.50	\$21.32	\$21.19
Passengers/Revenue Hour	2.3	1.8	2.3

Standard Report Template

<u>Operating Data</u>	<u>Third Quarter</u>		<u>Cumulative YTD</u>
	Blue Line	Red Line	
Total Operating Costs	\$28,000	\$23,200	\$153,950
			\$0
Contractor Cost	\$0	\$0	\$0
In House Cost	\$22,000	\$17,500	\$117,250
Maintenance Cost	\$2,500	\$0	\$8,900
Fuel	\$3,000	\$2,100	\$15,000
Insurance	\$0	\$0	\$0
Administrative Costs (Personnel expenses)	\$0	\$0	\$0
(printing marketing materials, promotions, etc)	\$500	\$500	\$3,500
Vehicle Service Hours	1,500	1,100	\$7,450
Passengers	3,500	2,000	\$16,500
Performance Indicators			
Operating Cost/Passenger	\$8.00	\$11.60	\$9.33
Operating Cost/Hour	\$18.67	\$21.09	\$20.66
Passengers/Revenue Hour	2.3	1.8	2.2

Standard Report Template

Operating Data	Fourth Quarter		Year-End Data
	Blue Line	Red Line	
Total Operating Costs	\$26,500	\$25,300	\$205,750
			\$0
Contractor Cost	\$0	\$0	\$0
In House Cost	\$21,000	\$17,500	\$155,750
Maintenance Cost	\$2,500	\$2,000	\$13,400
Fuel	\$2,500	\$2,200	\$19,700
Insurance	\$0	\$0	\$0
Administrative Costs (Personnel expenses)	\$0	\$0	\$0
(printing marketing materials, promotions, etc)	\$500	\$500	\$4,500
Vehicle Service Hours	1,500	1,100	\$10,050
Passengers	1,900	2,000	\$22,000
Performance Indicators			
Operating Cost/Passenger	\$7.57	\$12.65	\$9.35
Operating Cost/Hour	\$17.67	\$23.00	\$20.47
Passengers/Revenue Hour	2.3	1.8	2.2

APPENDIX E

SHUTTLE PROGRAM MANAGERS

Appendix E**Shuttle Program Managers**

City	Program	Contact Information
Burlingame	North Burlingame Shuttle	Christine Maley-Grubl Michael Stevenson 1150 Bayhill Drive, Suite 107 San Bruno, Ca 94066 (650) 288-8170
Foster City	Foster City (Connections)	Leslie Carmichael 610 Foster City Blvd. Foster City, Ca 94404 (650) 286-3236
Millbrae	Millbrae Senior Shuttle	Michael Wride 621 Magnolia Avenue Millbrae, Ca 94030 (650) 259-2364
East Palo Alto	East Palo Alto Shuttles	Fernando Bravo Interim Public Works Director City of East Palo Alto 2200 University Ave East Palo Alto CA 94303 (650) 853-3117
San Carlos	San Carlos (SCOOT)	Kimberley Harbert SCOOT Outreach Coordinator City of San Carlos 600 Elm Street San Carlos CA 94070 (650) 281-1002
Menlo Park	Menlo Park	Debbie Helming City of Menlo Park 701 Laurel Street Menlo Park, CA 94025 (650) 330-6770

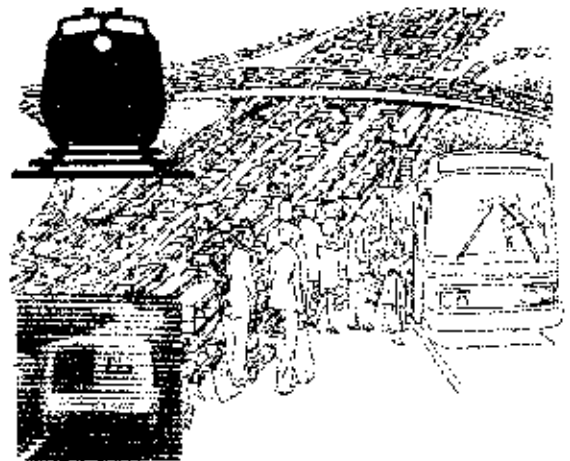
San Mateo County

Countywide Transportation Plan

January 2005



Transportation Data - Census 2000



City/County Association of Governments
of San Mateo County (C/CAG)

In association with
The Cities of San Mateo County
San Mateo County Transit District (SamTrans)



Commute Patterns

Commute Patterns Work Trips

41% of Residents
Commute out
146,167



40% of Work Force
Commute In
140,807



59% of Residents
Commute Within
206,093



Commute Patterns

- An almost equal number of workers commute into the county (140,807 or 40%) as residents who commute out of the county (146,167 or 41%).

Historical Commute Patterns Work Trips 1960 – 2030

	Total Jobs	Residents Commuting Out	Work Force Commuting In	Residents Commuting Within
1960 Census	N/A	75,000 (0.43)	28,000	99,000 (0.57)
1970 Census	N/A	93,311 (0.40)	63,629	139,653 (0.60)
1980 Census	259,795	121,373 (0.40)	74,220 (0.29)	180,143 (0.60)
1990 Census	303,600	142,347 (0.42)	109,982 (0.36)	199,760 (0.58)
2000 Census	395,890	146,162 (0.41)	140,805 (0.36)	206,053 (0.59)
2010 MTC Forecast	429,100	152,799 (0.41)	159,524 (0.37)	218,915 (0.59)
2020 MTC Forecast	489,020	166,544 (0.40)	187,130 (0.38)	252,555 (0.60)
2030 MTC Forecast	526,600	172,468 (0.39)	209,439 (0.40)	267,718 (0.61)

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(12/21/04)

**Comparison of County to County Work Trips
Out-Commute
1960 – 2000**

	San Mateo to San Mateo	San Mateo to San Francisco	San Mateo to Santa Clara	San Mateo to Alameda	San Mateo to Other	TOTAL
1960	99,000 (0.57)	59,000 (0.34)	14,000 (0.08)	2,000 (0.01)	0 (0.00)	174,000 (1.00)
1970	139,653 (0.60)	67,723 (0.29)	20,933 (0.09)	3,840 (0.02)	1,015 (0.00)	232,964 (1.00)
1980	180,143 (0.60)	78,706 (0.26)	33,853 (0.11)	6,686 (0.02)	2,128 (0.00)	301,516 (1.00)
1990	199,760 (0.58)	78,832 (0.23)	44,001 (0.13)	13,188 (0.04)	6,326 (0.02)	342,107 (1.00)
2000	206,093 (0.59)	71,702 (0.20)	55,473 (0.16)	14,783 (0.04)	4,209 (0.01)	352,260 (1.00)

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**Comparison of County to County Work Trips
In-Commute
1960 – 2000**

	San Mateo to San Mateo	San Francisco to San Mateo	Santa Clara to San Mateo	Alameda to San Mateo	Other to San Mateo	TOTAL
1960	99,000 (0.78)	12,000 (0.10)	13,000 (0.10)	3,000 (0.02)	0 (0.00)	127,000 (1.00)
1970	139,653 (0.69)	18,349 (0.09)	28,060 (0.14)	11,378 (0.05)	5,842 (0.03)	203,282 (1.00)
1980	180,143 (0.71)	21,443 (0.08)	27,676 (0.11)	15,125 (0.06)	9,976 (0.04)	254,363 (1.00)
1990	199,760 (0.65)	32,170 (0.10)	31,896 (0.10)	26,833 (0.09)	19,283 (0.06)	309,742 (1.00)
2000	206,093 (0.59)	43,306 (0.12)	40,666 (0.12)	33,501 (0.10)	23,334 (0.07)	346,900 (1.00)

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County to County Work Trips by Mode

	Total	Drive Alone	Carpool	SanTrans or Bus	BART	Caltrain
San Mateo to San Mateo	180,145 (100.0)	129,459 (71.9)	20,588 (11.4)	4,759 (2.6)	230 (0.1)	1,050 (0.6)
San Mateo to San Francisco	70,310 (100.0)	42,385 (60.3)	12,295 (17.5)	5,052 (7.2)	6,183 (8.8)	3,184 (4.5)
San Francisco to San Mateo	37,715 (100.0)	28,365 (75.2)	5,236 (13.9)	1,970 (5.2)	344 (0.9)	700 (1.9)
San Mateo to Santa Clara	46,365 (100.0)	38,454 (82.9)	5,089 (11.0)	712 (1.5)	22 (0.1)	1,238 (2.7)
Santa Clara to San Mateo	34,055 (100.0)	28,229 (82.9)	4,108 (12.1)	356 (1.1)	0 (0.0)	904 (2.7)
San Mateo to Alameda	12,985 (100.0)	10,064 (77.5)	1,787 (13.7)	104 (0.8)	769 (5.9)	36 (0.2)
Alameda to San Mateo	27,645 (100.0)	19,531 (70.7)	6,157 (22.3)	306 (1.1)	418 (1.5)	135 (0.5)
Santa Clara to San Francisco	7,750 (100.0)	4,930 (63.6)	859 (11.1)	289 (3.7)	174 (2.3)	1,379 (17.8)
San Francisco to Santa Clara	14,510 (100.0)	10,370 (71.5)	2,258 (15.6)	434 (3.0)	159 (1.1)	890 (6.1)
Totals	431,480 (100.0)	311,787 (72.3)	58,377 (13.5)	13,982 (3.2)	8,299 (1.9)	9,546 (2.2)

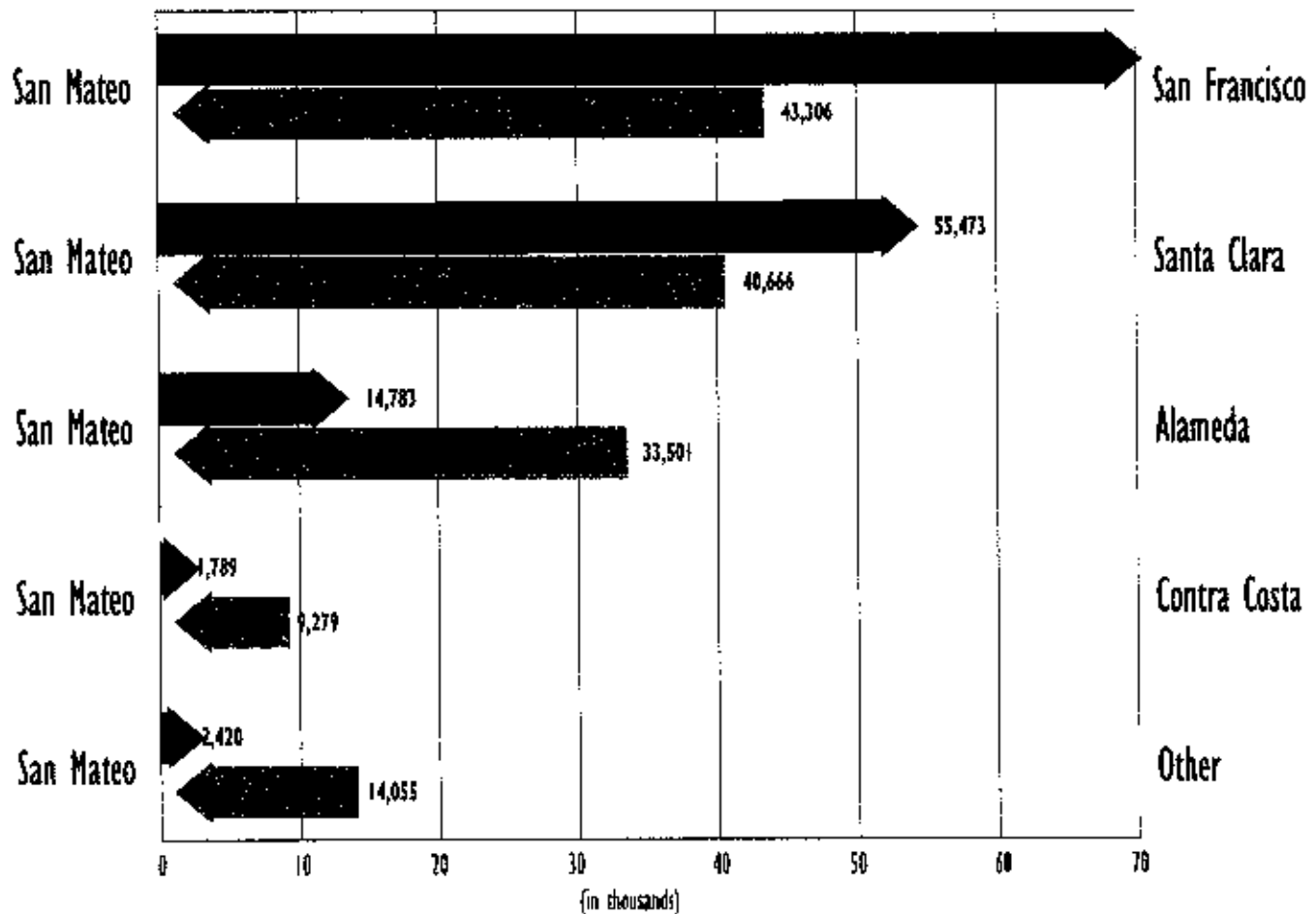
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Bay Area County-to-County Commute Patterns (All Means of Transportation)

County	Employed Residents	Residents Who Stay in County	Residents Who Commute Out	Non-Residents Who Commute In
San Mateo	352,215 (100.0)	208,053 (58.5)	146,162 (41.5)	140,805 (40.0)
San Francisco	415,210 (100.0)	321,913 (77.5)	93,297 (22.5)	257,340 (62.0)
Santa Clara	824,901 (100.0)	727,890 (88.2)	97,011 (11.8)	207,355 (25.1)
Alameda	674,977 (100.0)	453,859 (67.2)	221,118 (32.8)	222,248 (32.9)
Contra Costa	438,822 (100.0)	254,768 (58.1)	184,054 (41.9)	80,721 (18.4)
Solano	172,606 (100.0)	99,205 (57.5)	73,401 (42.5)	22,804 (13.2)
Napa	56,990 (100.0)	44,330 (77.8)	12,660 (22.2)	15,182 (26.6)
Sonoma	223,624 (100.0)	184,421 (82.5)	39,203 (17.5)	14,863 (6.7)
Marin	125,564 (100.0)	78,684 (62.7)	46,880 (37.3)	43,194 (34.4)
Total	3,284,908 (100.0)	2,371,123 (72.2)	913,785 (27.8)	1,004,512 (30.6)

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County to County Work Trips

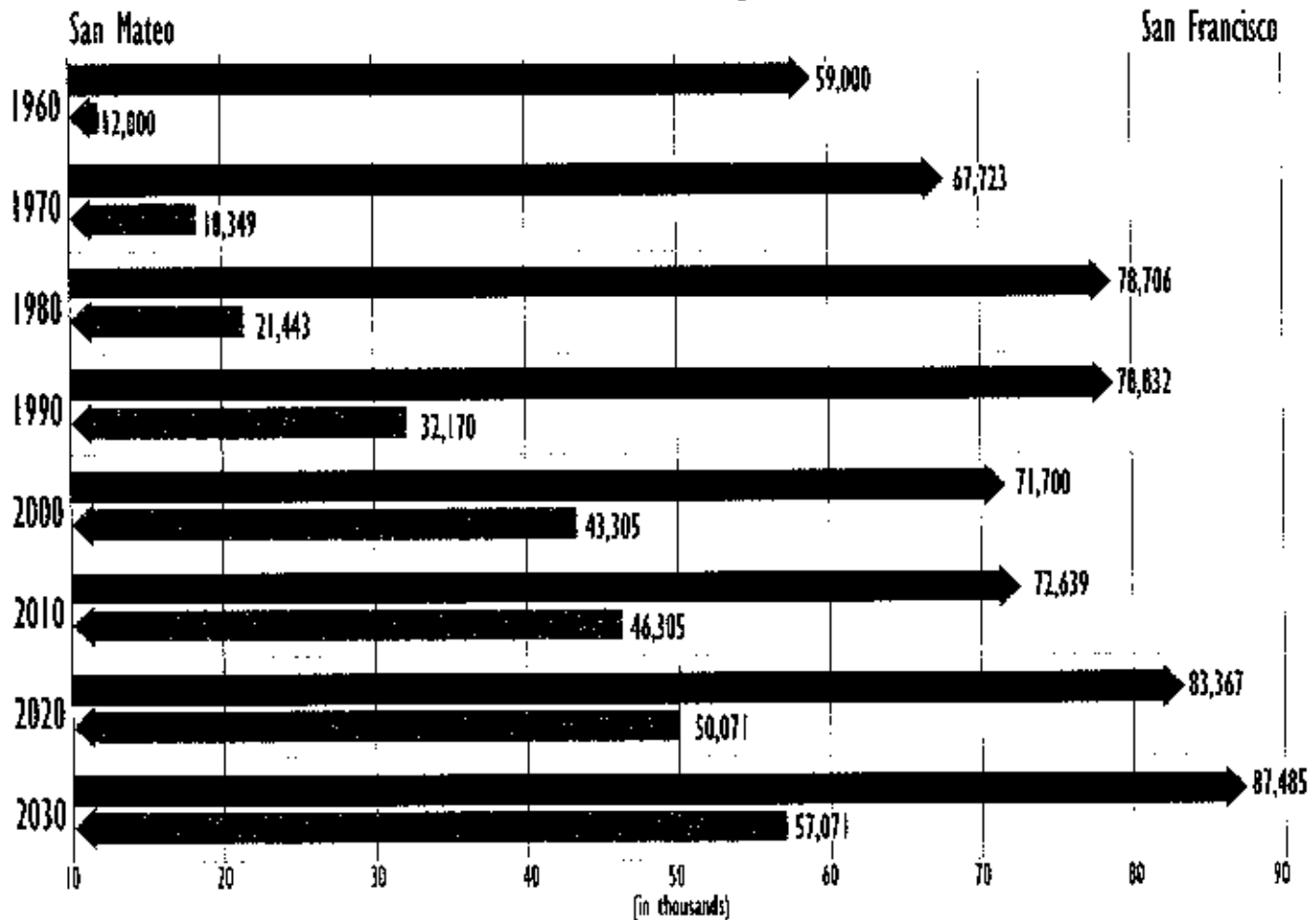


County to County Work Trips

- San Mateo County exports more workers (127,175) to San Francisco and Santa Clara Counties than it imports (83,972) from these counties.
- San Mateo County imports more workers (56,835) from Alameda, Contra Costa and other counties than it exports (18,992) to these counties.
- 71,702 San Mateo County residents or 49% of residents who commute out of the county commute to San Francisco.
- 55,473 San Mateo County residents or 38% of residents who commute out of the county commute to Santa Clara.

Commute Patterns San Mateo - San Francisco (1960 - 2030)

MTC Forecasts/ABAG Projections 2003

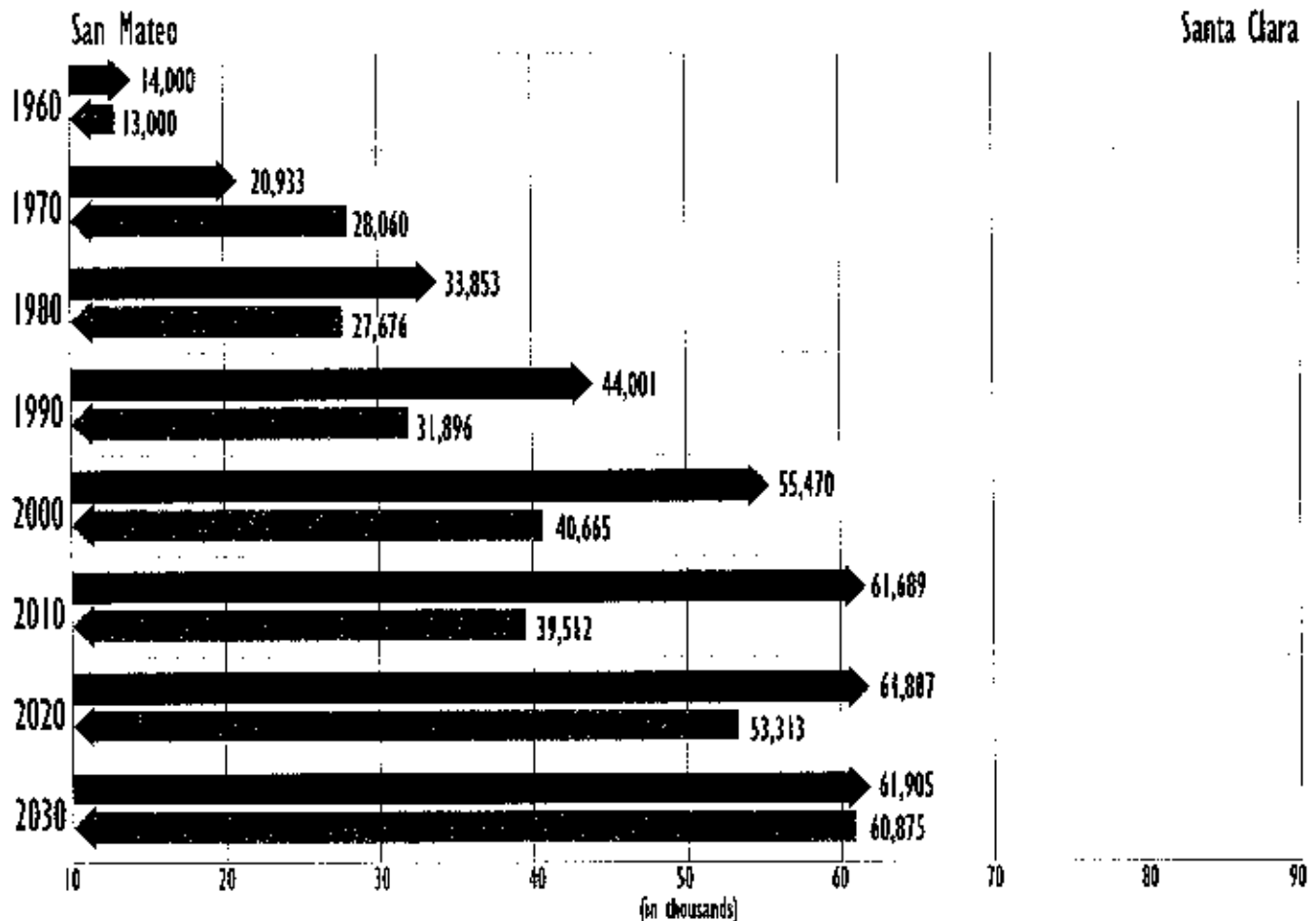


Historical Commute Patterns 1960-2030 between San Mateo and San Francisco

- Historically, more workers have commuted from San Mateo to San Francisco than from San Francisco to San Mateo.
- However, beginning in 1980 through 2000 the number of commuters from San Francisco to San Mateo County rose significantly by 21,862 workers or 102%.
- In contrast, during the same time period the number of workers commuting from San Mateo to San Francisco decreased by 7006 or 9%.
- Projections show that between 2000 and 2030 the number of workers commuting from San Francisco to San Mateo will increase by 13,766 or 32%, while the number of workers commuting from San Mateo to San Francisco will increase by 15,785 or 22%.

Commute Patterns San Mateo - Santa Clara (1960 - 2030)

MTC Forecasts/ABAG Projections 2003

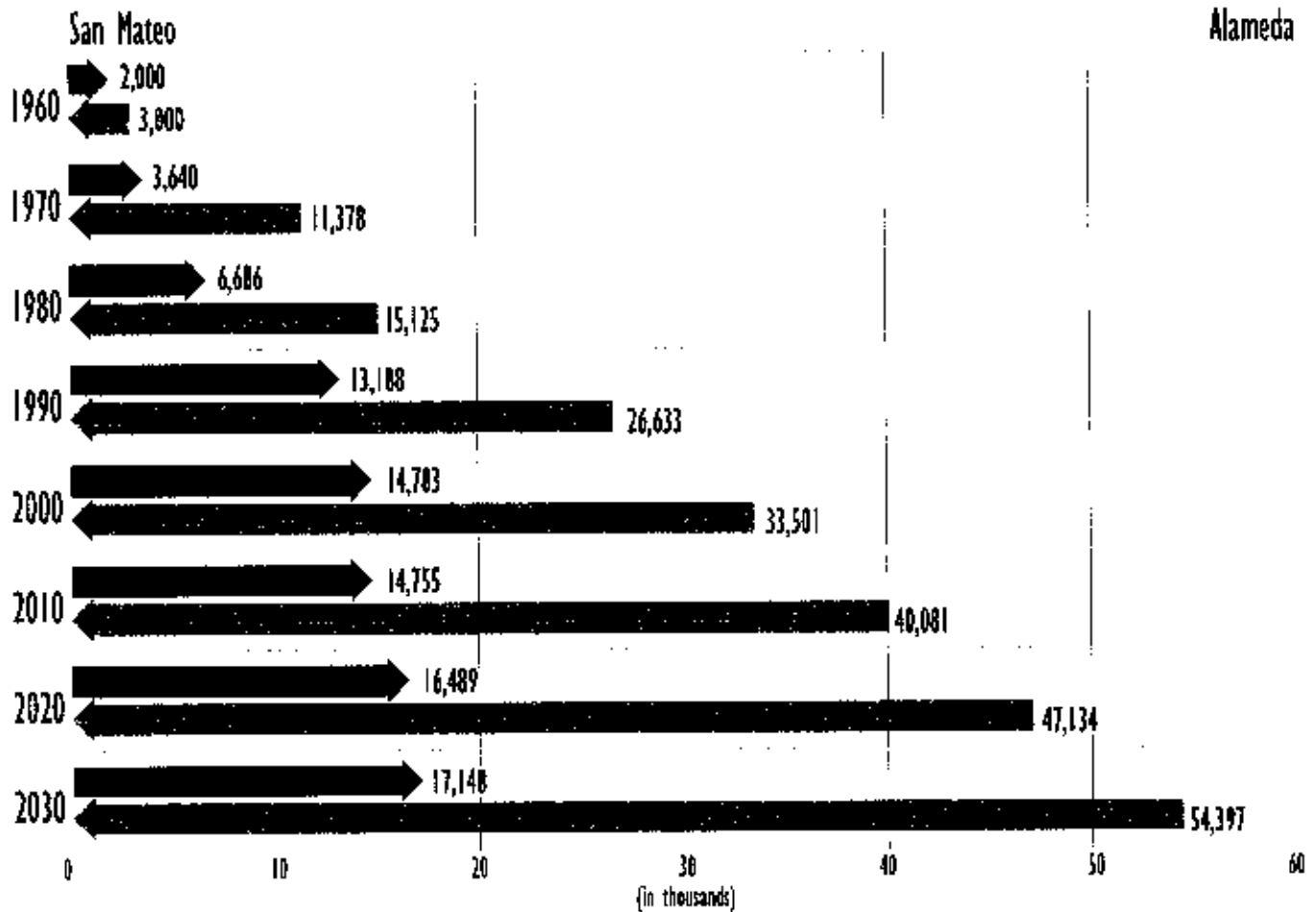


Historical Commute Patterns 1960-2030 between San Mateo and Santa Clara

- Since 1980 more commuters have commuted from San Mateo to Santa Clara County than the reverse.
- Between 1980 and 2000 the number of commuters from San Mateo to Santa Clara increased by 21,617 or 64%.
- Projections show that in 2030 that the county-to-county work trips between San Mateo and Santa Clara will almost be equal.

Commute Patterns San Mateo - Alameda (1960 - 2030)

MTC Forecasts/ABAG Projections 2003

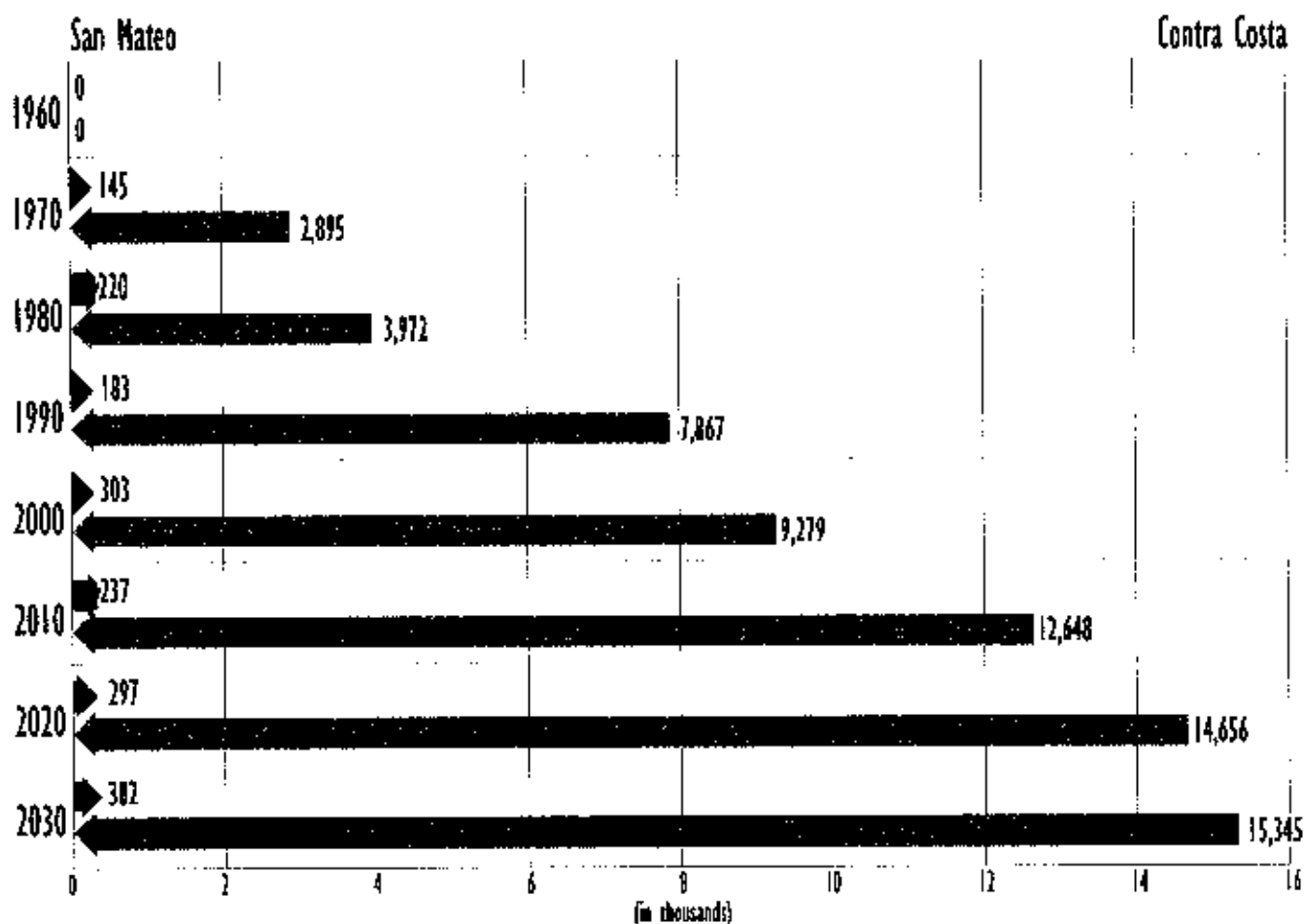


Historical Commute Patterns 1960-2030 between San Mateo and Alameda

- Historically, significantly more workers have commuted from Alameda to San Mateo.
- Projections show that between **2000** and **2030** the number of workers commuting from Alameda to San Mateo will increase by **20,896** or **62%**.
- In contrast, during the same time period the number of workers commuting from San Mateo to Alameda will increase by only **2,365** or **16%**.

Commute Patterns San Mateo - Contra Costa (1960 - 2030)

MTC Forecasts/ABAG Projections 2003



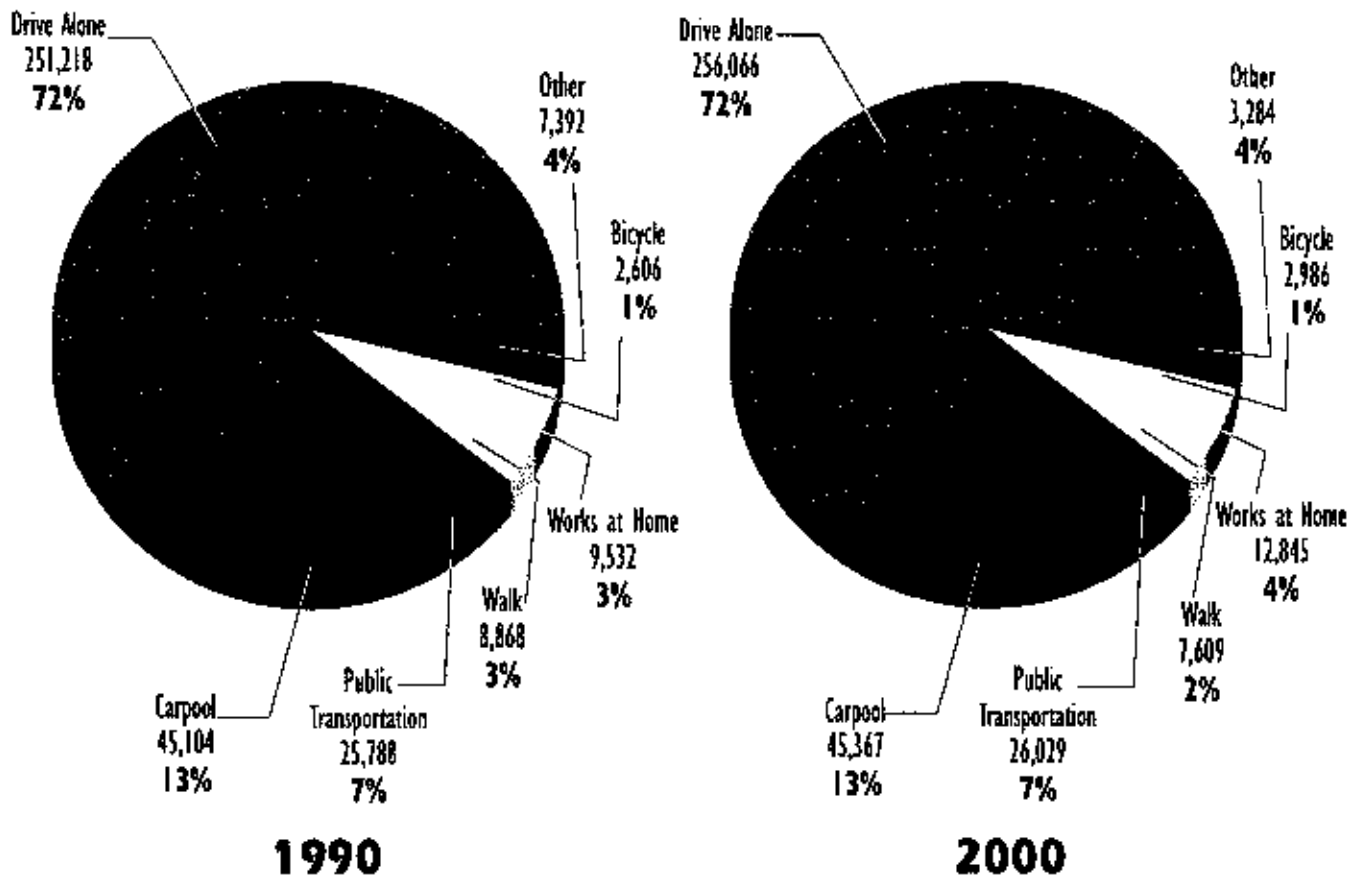
Historical Commute Patterns 1960-2030 between San Mateo and Contra Costa

- Historically, significantly more workers have commuted from Contra Costa to San Mateo
- Projections show that between 2000 and 2030 the number of workers commuting from Contra Costa to San Mateo will increase by 6,066 or 65%.



Mode of Travel

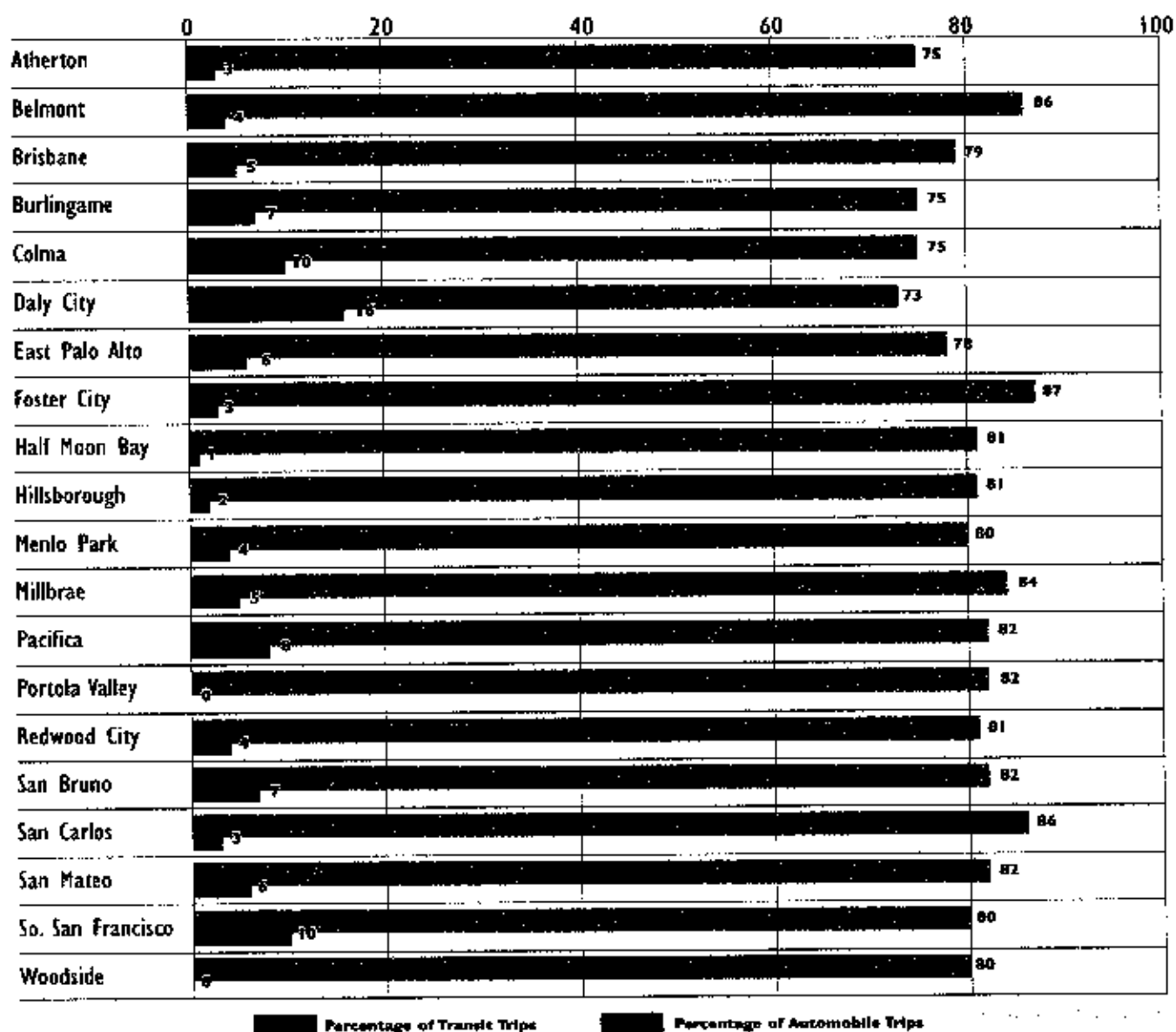
Mode of Travel San Mateo County Residents Work Trips



Mode of Travel

- 85% of San Mateo County residents travel to work by automobile.
- Only 7% of San Mateo County residents travel to work by transit.
- Between 1990 and 2000 these percentages did not change.

Mode Split - Automobile vs Transit San Mateo County Residents - Workers



Mode Split

- Daly City has the highest percentage of transit usage with 16% of workers using transit.
- Colma and South San Francisco have 10% of their workers using transit while Pacifica has 8%.
- Daly City has the lowest percentage of workers commuting via automobile at 73%.

Mode Split - Automobile vs. Transit
Place of Residence
San Mateo County Residents
Workers

City	Labor Force	Automobile Trips	Transit Trips
Atherton	3,205 (1.00)	2,413 (0.75)	93 (0.03)
Belmont	14,804 (1.00)	12,747 (0.86)	533 (0.04)
Brisbane	2,365 (1.00)	1,876 (0.79)	117 (0.05)
Burlingame	16,271 (1.00)	12,169 (0.75)	1,121 (0.07)
Colma	1,115 (1.00)	838 (0.75)	108 (0.10)
Daly City	55,084 (1.00)	40,343 (0.73)	8,959 (0.16)
East Palo Alto	6,798 (1.00)	5,269 (0.78)	403 (0.06)
Foster City	16,420 (1.00)	14,288 (0.87)	554 (0.03)
Half Moon Bay	12,986 (1.00)	10,481 (0.81)	191 (0.01)
Hillsborough	4,736 (1.00)	3,842 (0.81)	112 (0.02)
Menlo Park	23,821 (1.00)	19,009 (0.80)	910 (0.04)
Millbrae	9,829 (1.00)	8,292 (0.84)	479 (0.05)
Pacifica	22,107 (1.00)	18,144 (0.82)	1,652 (0.08)
Portola Valley	3,210 (1.00)	2,623 (0.82)	0 (0.00)
Redwood City	53,906 (1.00)	43,652 (0.81)	2,366 (0.04)
San Bruno	21,992 (1.00)	18,100 (0.82)	1,632 (0.07)
San Carlos	16,343 (1.00)	13,965 (0.86)	551 (0.03)
San Mateo	51,892 (1.00)	42,642 (0.82)	2,894 (0.06)
South San Francisco	30,878 (1.00)	24,656 (0.80)	3,054 (0.10)
Woodside	2,952 (1.00)	2,369 (0.80)	7 (0.00)
Total	370,714 (1.00)	297,718 (0.80)	25,736 (7.00)

**Mode Split
Automobile vs. Transit
San Mateo County Residents
Workers**

	Labor Force	Auto Trips	Transit Trips
North County	143,370 (1.00) (0.39)	112,249 (0.78) (0.38)	16,001 (0.11) (0.62)
Mid-Bayside	104,123 (1.00) (0.28)	85,688 (0.82) (0.29)	5,214 (0.05) (0.20)
South Bayside	110,235 (1.00) (0.30)	89,300 (0.81) (0.30)	4,330 (0.04) (0.17)
Midcoast	12,986 (1.00) (0.03)	10,481 (0.81) (0.03)	191 (0.02) (0.01)
Total	370,714 (1.00) (1.00)	297,718 (0.80) (1.00)	25,736 (0.07) (1.00)

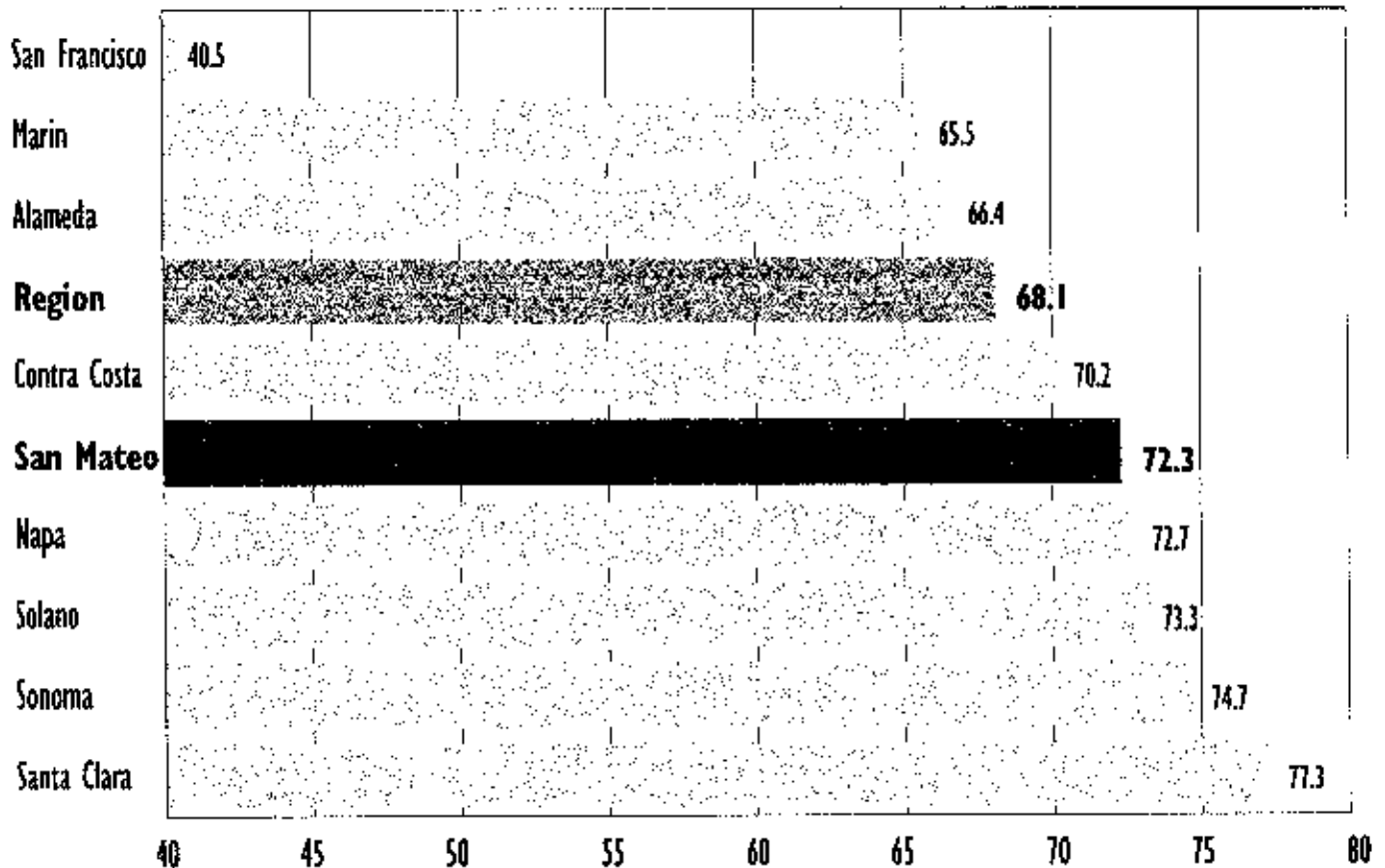
TAM:kcd - TAM00569_WKT.DOC (5/5/04)

Mode of Travel Comparison of Nine Bay Area Counties Work Trips

	Drive Alone	Carpool	Public Transportation	Walk	Work at Home	Other
Alameda	66.4	13.8	10.6	3.2	3.5	2.5
Contra Costa	70.2	13.5	9.0	1.5	4.3	1.5
Marin	65.5	10.7	10.1	3.0	8.8	1.9
Napa	72.7	14.8	1.4	4.1	5.1	1.9
San Francisco	40.5	10.8	31.1	9.4	4.6	3.6
San Mateo	72.3	12.8	7.4	2.1	3.6	1.7
Santa Clara	77.3	12.2	3.5	1.8	3.1	2.0
Solano	73.3	17.7	2.7	1.6	3.1	1.6
Sonoma	74.7	12.6	2.4	3.1	5.4	1.7
All	68.1	12.9	9.5	3.3	4.1	2.2

MLD:kod - ML000353_WKOT.DOC (12/21/04)

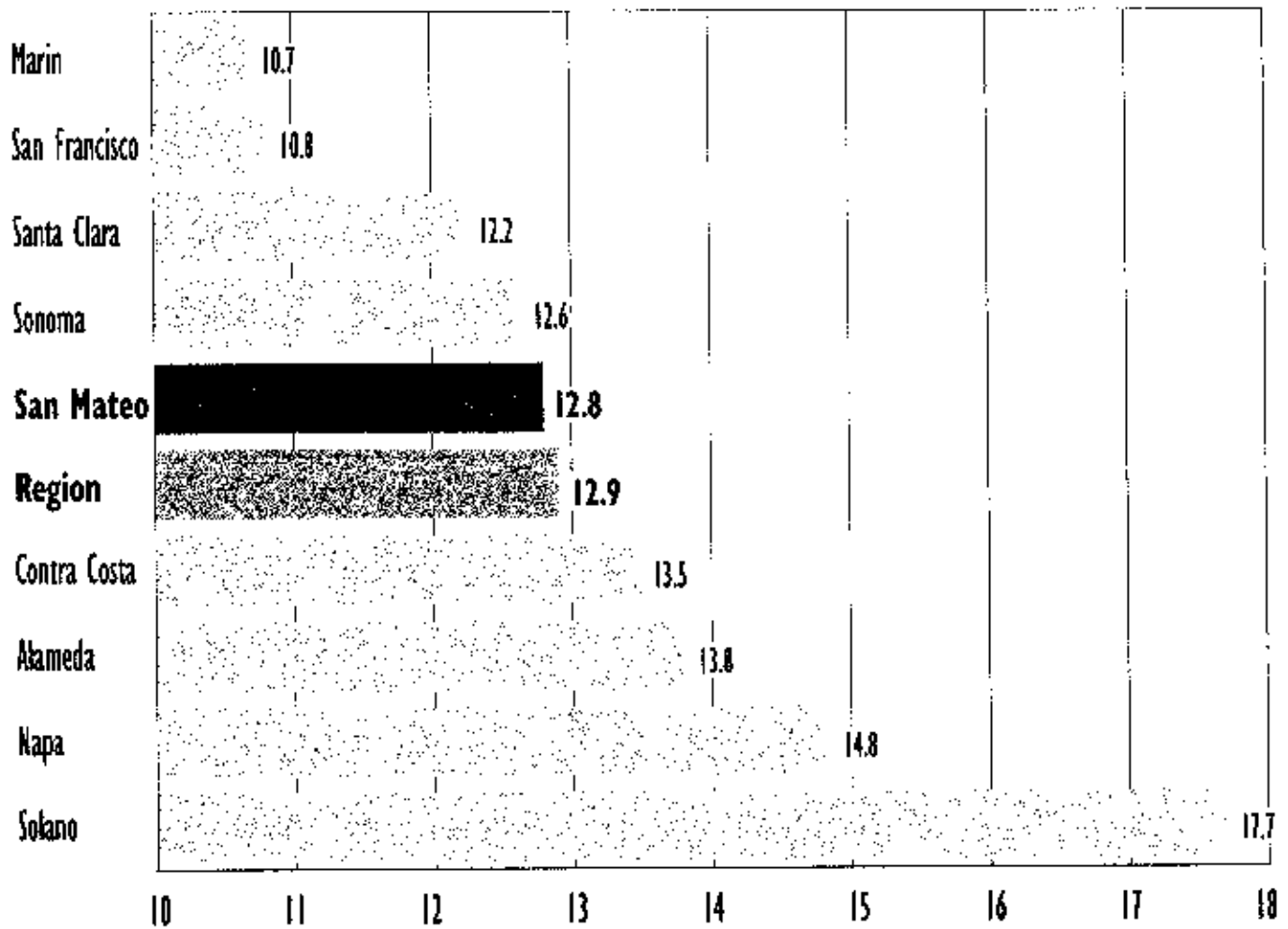
Percentage of **Drive Alone** Work Trips Comparison of Nine Bay Area Counties



Percentage of Drive Alone Work Trips

- At **72.3%** San Mateo County exceeds the regional average of **68.1%** of drive alone work trips.
- Santa Clara County has the highest percentage of drive alone work trips at **77.3%** while San Francisco has the lowest at **40.5%**

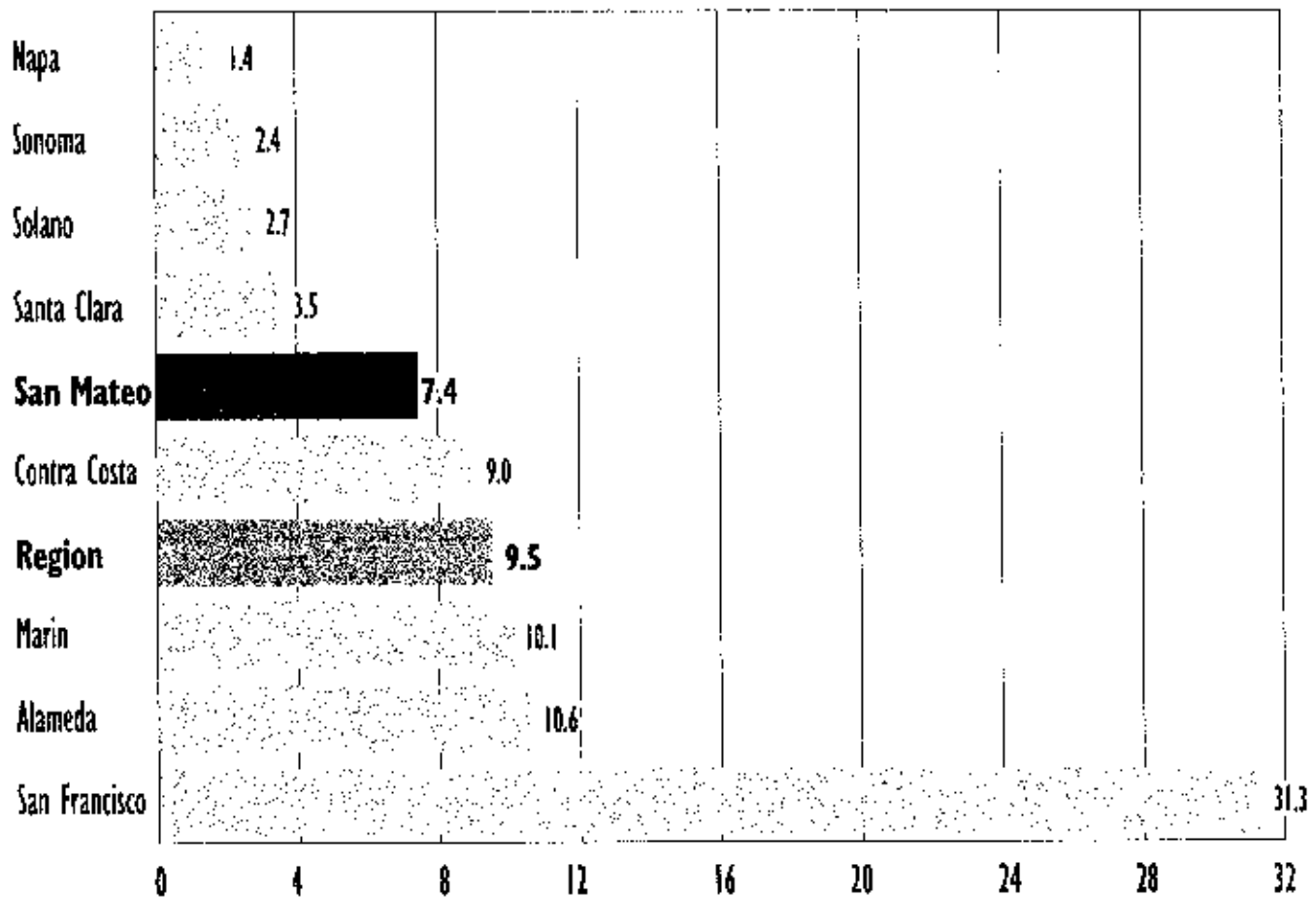
Percentage of **Carpool** Work Trips Comparison of Nine Bay Area Counties



Percentage of Carpool Work Trips

- At **12.8%** San Mateo County is slightly less than the regional average of **12.9%** of carpool work trips.
- Solano County has the highest percentage of carpool work trips at **17.7%** while Marin County has the lowest at **10.7%**.

Percentage of Transit Work Trips Comparison of Nine Bay Area Counties



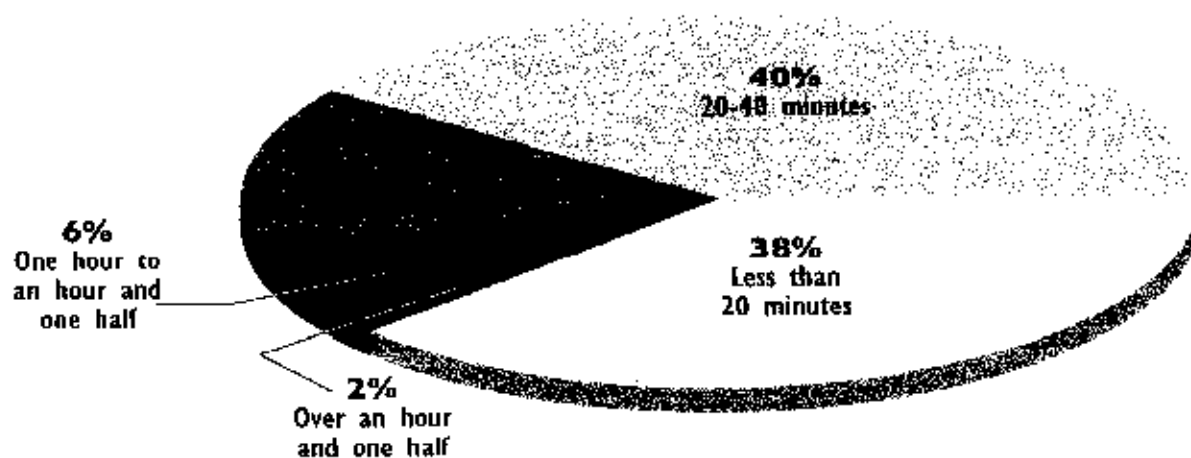
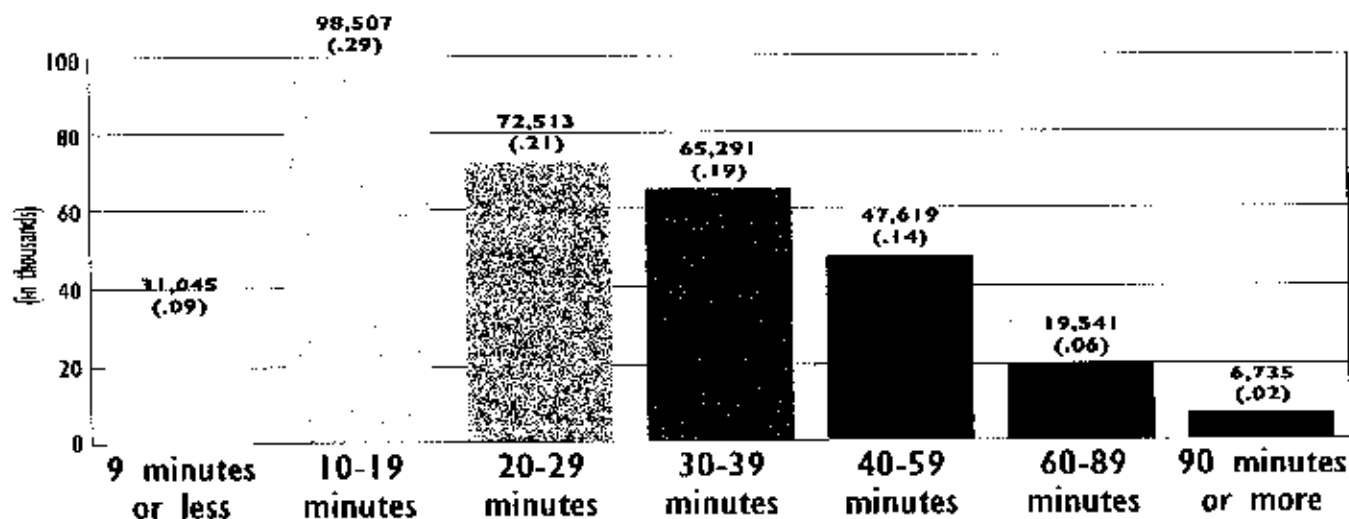
Percentage of Transit Work Trips

- At **7.4%** San Mateo County falls short of the regional average of **9.5%** of transit work trips.
- San Francisco has the highest percentage of transit work trips at **31.3%** while Napa County has the lowest at **1.4%**.



Travel Time

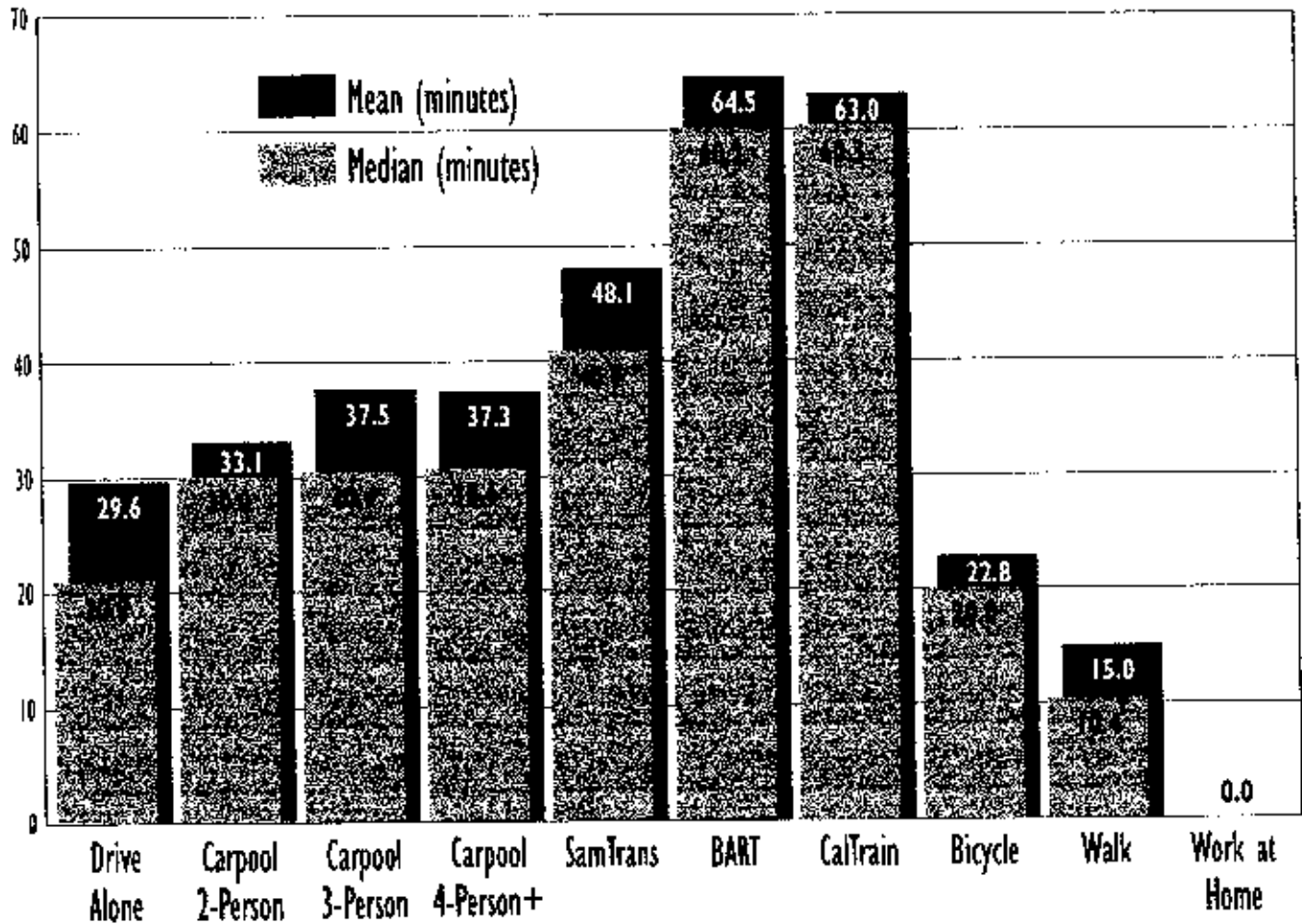
Travel Time San Mateo County Residents - Work Trips



Travel Time

- 92% of San Mateo County workers travel one hour or less to work.
(total number of people per percentage for each line)
- 59% of San Mateo County workers travel 29 minutes or less.
- Only 8% travel one hour or more.

Travel Time by Mode San Mateo County Residents Work Trips

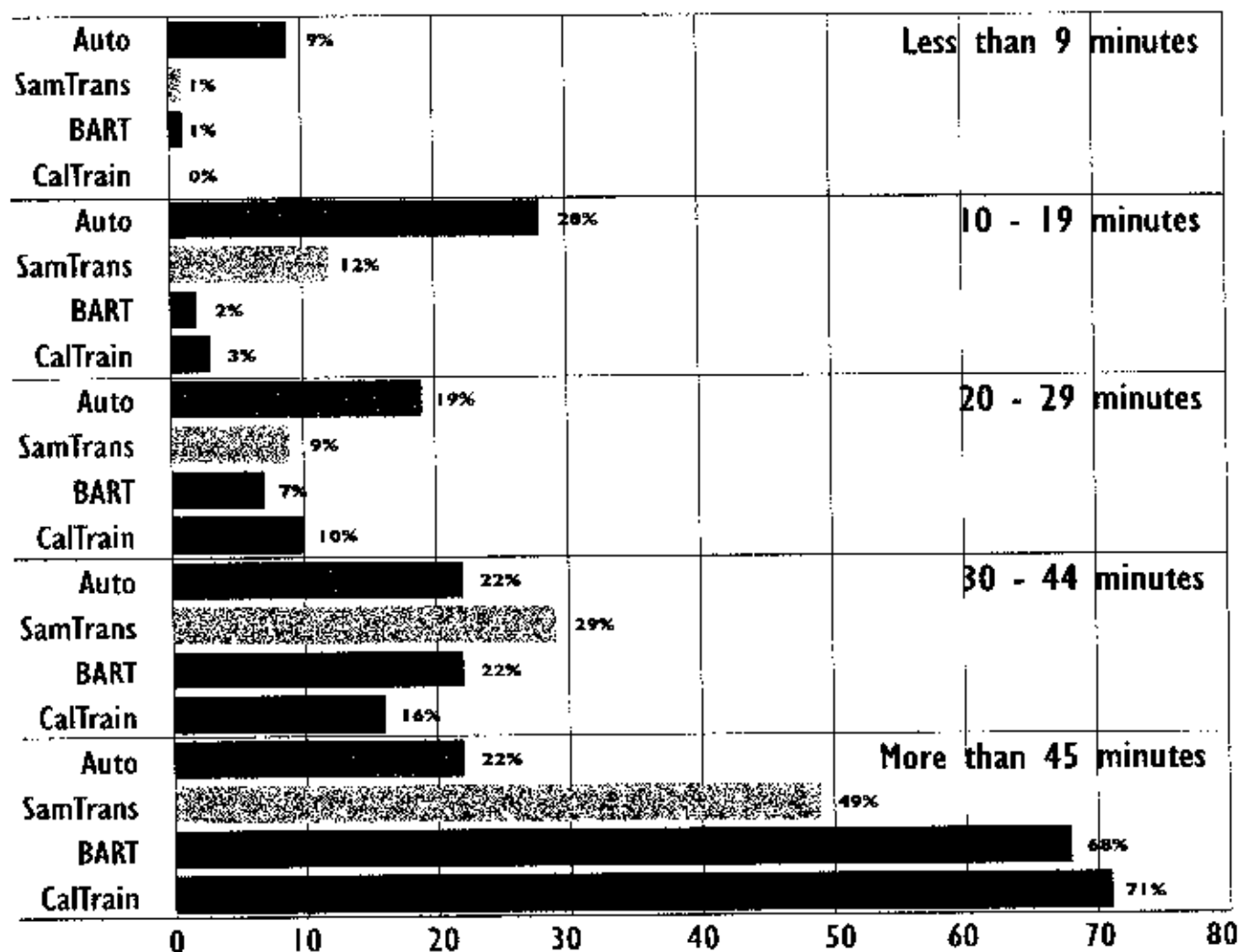


Travel Time by Mode

- Bart and Caltrain have the longest average travel times at **64.5 minutes** and **63.0 minutes** respectively, since transit trips tend to be long distance trips and they include the amount of time it takes to get to a transit station.
- Workers that drive alone have the lowest average travel time at **29.6 minutes** with the exceptions of those that bicycle at **22.8 minutes** and those that walk at **15.0 minutes**.

Travel Time by Mode San Mateo County Residents - Work Trips

Percentage of Workers



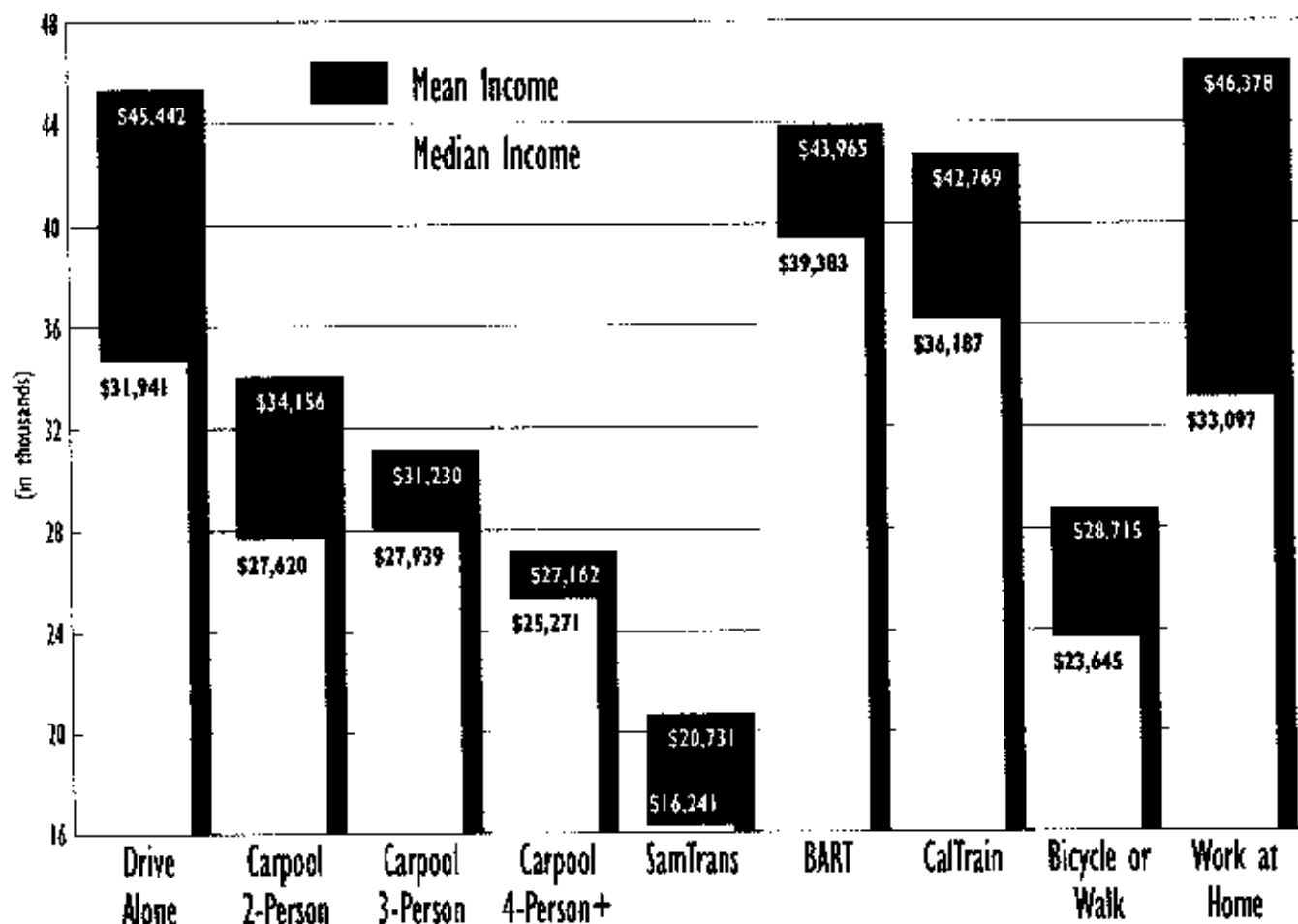
Travel Time by Mode Percentage of Workers

- A majority of transit trips take 45 minutes or more.
- Automobile trips are both short and long distance trips, therefore travel times range from 10 minutes to over 45 minutes.



Income by Mode

Income by Mode San Mateo County Residents Work Trips



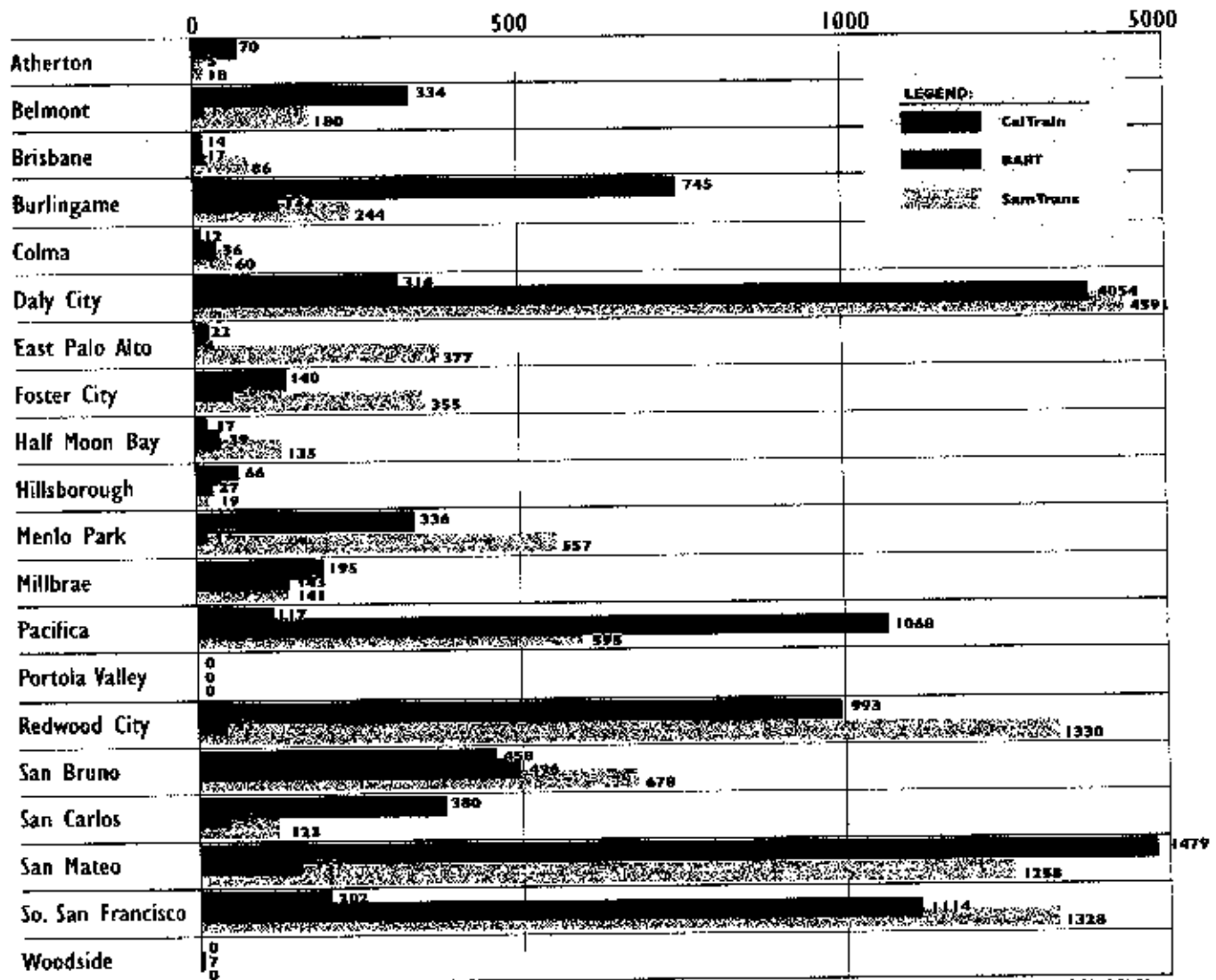
Income by Mode

- The highest income earners work from home and average **\$46,378** per year.
- SamTrans riders have the lowest incomes with an average income of **\$20,731** per year.
- BART and Caltrain riders have relatively high average incomes of **\$43,965** and **\$42,769** respectively.



Place of Residence

CalTrain, BART, and SamTrans Ridership Place of Residence - Workers



CDAGS/cph/rtr (3-04) 4-21-04

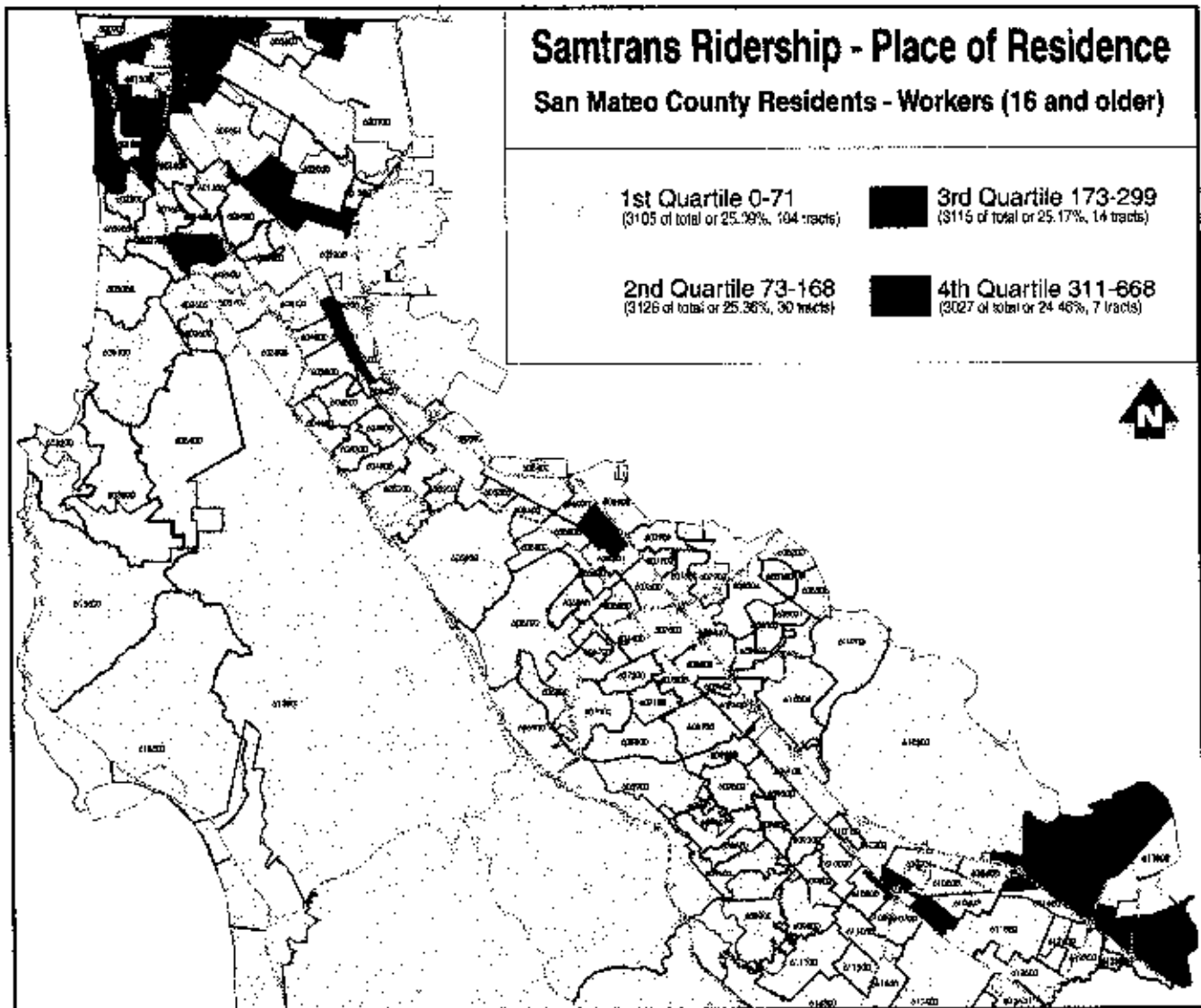
Caltrain, BART, and SamTrans Ridership

- The cities with the largest numbers of Bart riders are Daly City with 4054, South San Francisco with 1114, and Pacifica with 1068.
- The cities with the largest number of Caltrain riders are San Mateo with 1479, Redwood City with 993, and Burlingame with 745.
- The cities with the largest number of SamTrans riders are Daly City with 4591, Redwood City with 1330, and South San Francisco with 1328.

**BART, Caltrain and SamTrans Ridership
Place of Residence
San Mateo County Residents - Workers**

City	BART	Caltrain	SamTrans	Total
Atherton	5 (0.06) (0.00)	70 (0.75) (0.01)	18 (0.19) (0.00)	93 (1.00) (0.00)
Belmont	19 (0.03) (0.00)	334 (0.63) (0.06)	180 (0.34) (0.02)	533 (1.00) (0.02)
Brisbane	17 (0.14) (0.00)	14 (0.12) (0.00)	86 (0.74) (0.01)	117 (1.00) (0.01)
Burlingame	132 (0.12) (0.02)	745 (0.66) (0.13)	244 (0.22) (0.02)	1,121 (1.00) (0.04)
Colma	36 (0.33) (0.00)	12 (0.11) (0.00)	60 (0.56) (0.00)	108 (1.00) (0.01)
Daly City	4,054 (0.45) (0.54)	314 (0.04) (0.05)	4,581 (0.51) (0.38)	8,959 (1.00) (0.35)
East Palo Alto	4 (0.01) (0.00)	22 (0.05) (0.00)	377 (0.94) (0.03)	403 (1.00) (0.02)
Foster City	59 (0.11) (0.01)	140 (0.25) (0.03)	355 (0.64) (0.03)	554 (1.00) (0.02)
Half Moon Bay	39 (0.20) (0.01)	17 (0.09) (0.00)	135 (0.71) (0.01)	191 (1.00) (0.01)
Hillsborough	27 (0.24) (0.00)	86 (0.59) (0.01)	19 (0.17) (0.00)	112 (1.00) (0.01)
Menlo Park	17 (0.02) (0.00)	336 (0.37) (0.06)	557 (0.61) (0.05)	910 (1.00) (0.04)
Millbrae	143 (0.30) (0.02)	195 (0.41) (0.03)	141 (0.29) (0.01)	479 (1.00) (0.02)
Pacifica	1,068 (0.60) (0.14)	117 (0.07) (0.02)	595 (0.33) (0.05)	1,780 (1.00) (0.07)
Portola Valley	0 (0.00) (0.00)	0 (0.00) (0.00)	0 (0.00) (0.00)	0 (0.00) (0.00)
Redwood City	43 (0.02) (0.01)	993 (0.42) (0.17)	1,330 (0.56) (0.11)	2,366 (1.00) (0.09)
San Bruno	496 (0.30) (0.07)	458 (0.28) (0.08)	678 (0.42) (0.06)	1,632 (1.00) (0.06)
San Carlos	48 (0.09) (0.01)	380 (0.69) (0.07)	123 (0.22) (0.01)	551 (1.00) (0.02)
San Mateo	157 (0.05) (0.02)	1,479 (0.51) (0.25)	1,258 (0.44) (0.10)	2,894 (1.00) (0.11)
South San Francisco	1,114 (0.42) (0.15)	202 (0.08) (0.03)	1,328 (0.50) (0.11)	2,644 (1.00) (0.10)
Woodside	7 (1.00) (0.00)	0 (0.00) (0.00)	0 (0.00) (0.00)	7 (1.00) (0.00)
Total	7,485 (0.29) (1.00)	5,884 (0.23) (1.00)	12,075 (0.48) (1.00)	25,454 (1.00) (1.00)

TAM:krd - TAM00485_WKT.DOC (4/14/04)



SamTrans Ridership

San Francisco is Predominant Destination of all SamTrans Work Trips

Forty seven percent (5057 residents) of all SamTrans trips end in San Francisco.

North County Cities are Predominant Origins of SamTrans Work Trips

Sixty one percent (7419 residents) of SamTrans riders live in North County (Daly City, San Bruno, South San Francisco, Millbrae, Pacifica, Brisbane).

Sixty three percent (6719 riders) of SamTrans trips originate in North County.

San Francisco is the Predominant Destination of North County SamTrans Work Trips

Sixty two percent (4190 riders) of SamTrans riders from North County cities commute to San Francisco.

Eighty three percent (4190 riders) of all SamTrans trips to San Francisco come from North County cities.

Daly City is the Predominant Origin of all SamTrans Work Trips

Forty percent (4199 riders) of all SamTrans trips originate in Daly City.

San Francisco is the Predominant Destination of Daly City SamTrans Work Trips

Seventy two percent (3005 riders) of SamTrans trips that originate in Daly City end in San Francisco.

SamTrans Origins and Destinations by City
Work Trips
San Mateo, Santa Clara, and San Francisco Counties

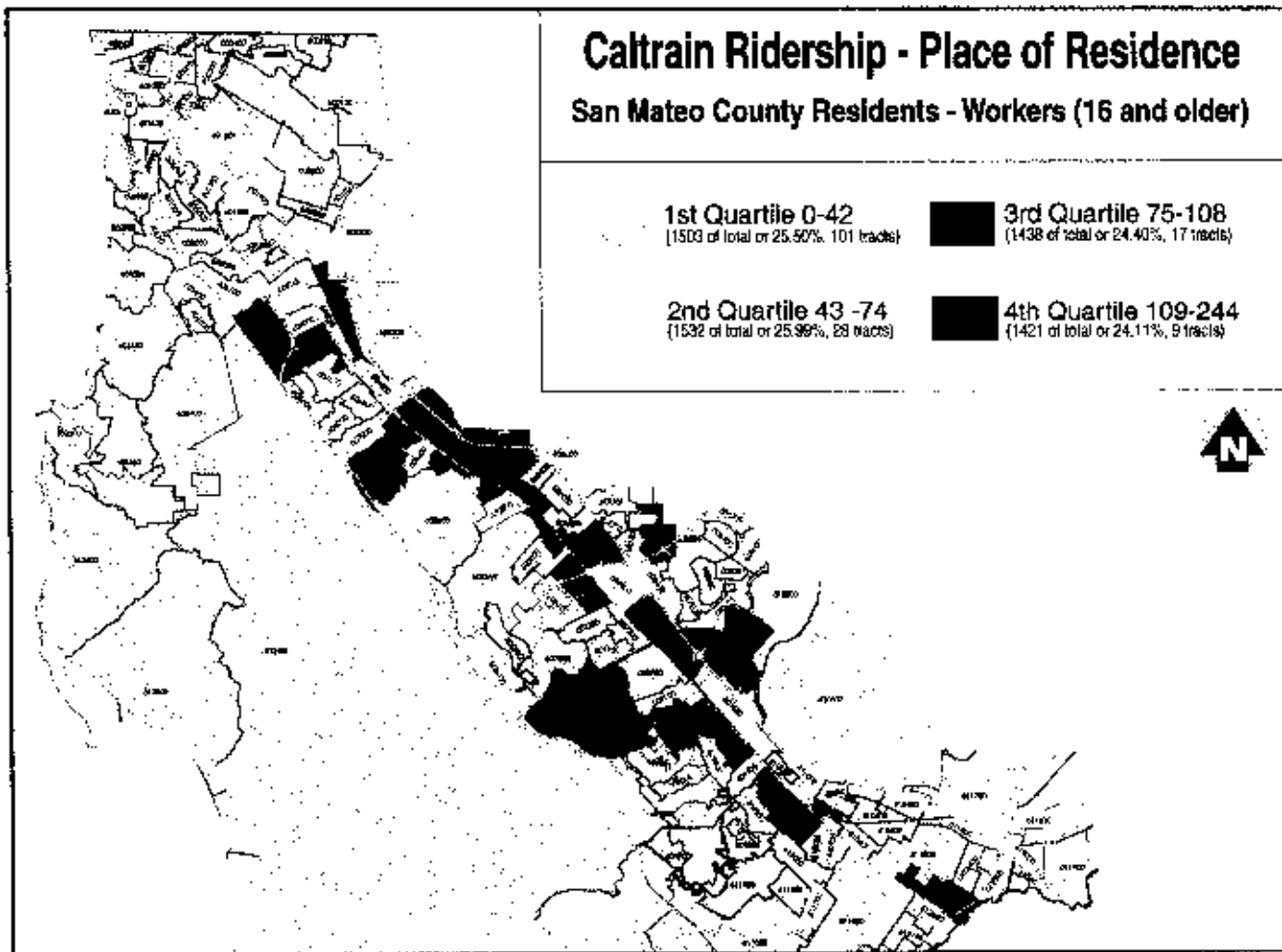
City	Origin	Destination	Total
San Francisco	0 (0.0)	5,092 (48.3)	5,092 (24.0)
Daly City	4,199 (39.4)	396 (3.8)	4,595 (21.7)
San Mateo	1,171 (11.0)	887 (8.4)	2,058 (9.7)
South San Francisco	1,187 (11.1)	695 (6.6)	1,882 (8.9)
Redwood City	1,136 (10.7)	519 (4.9)	1,655 (7.8)
San Bruno	640 (6.0)	370 (3.5)	1,010 (4.8)
Burlingame	218 (2.1)	660 (6.2)	878 (4.1)
Pacifica	482 (4.5)	118 (1.1)	600 (2.8)
East Palo Alto	503 (4.7)	30 (0.3)	533 (2.5)
Palo Alto	0 (0.0)	462 (4.4)	462 (2.1)
San Carlos	112 (1.0)	343 (3.3)	455 (2.1)
Foster City	305 (2.9)	143 (1.4)	448 (2.1)
Menlo Park	216 (2.0)	192 (1.8)	408 (1.9)
Millbrae	126 (1.2)	189 (1.8)	315 (1.5)
Belmont	143 (1.3)	55 (0.5)	198 (0.9)
Brisbane	85 (0.8)	80 (0.8)	165 (0.8)
Half Moon Bay	95 (0.9)	22 (0.2)	117 (0.6)
San Jose	0 (0.0)	98 (0.9)	98 (0.5)
Atherton	20 (0.2)	45 (0.4)	65 (0.3)
Santa Clara	0 (0.0)	44 (0.4)	44 (0.2)
Sunnyvale	0 (0.0)	39 (0.4)	39 (0.2)
Hillsborough	20 (0.2)	15 (0.1)	35 (0.2)
Los Altos	0 (0.0)	25 (0.2)	25 (0.1)
Mountain View	0 (0.0)	18 (0.2)	18 (0.1)
Saratoga	0 (0.0)	10 (0.1)	10 (0.1)
Cupertino	0 (0.0)	4 (0.0)	4 (0.0)
Total	10 658 (100.0)	10,551 (100.0)	21,209 (100.0)

TAM:kcd - TAM00782_WKT.DOC (8/18/04)

**SamTrans Origins and Destinations from San Mateo Cities
to San Mateo, Santa Clara, and San Francisco Counties
Work Trips**

Origin	Total	To Santa Clara County	To San Mateo County	To San Francisco County	To Other Counties
Atherton	20 (0.2)	0 (0.0)	20 (0.4)	0 (0.0)	0 (0.0)
Belmont	143 (1.3)	24 (3.4)	94 (2.0)	25 (0.5)	0 (0.0)
Brisbane	85 (0.8)	0 (0.0)	15 (0.3)	70 (1.4)	0 (0.0)
Burlingame	218 (2.1)	4 (0.6)	179 (3.8)	35 (0.7)	0 (0.0)
Daly City	4,199 (39.4)	44 (6.2)	1,103 (23.2)	3,005 (59.4)	47 (36.1)
East Palo Alto	503 (4.7)	308 (43.3)	175 (3.7)	20 (0.4)	0 (0.0)
Foster City	305 (2.9)	0 (0.0)	55 (1.2)	250 (4.9)	0 (0.0)
Half Moon Bay	95 (0.9)	10 (1.4)	36 (0.8)	49 (1.0)	0 (0.0)
Hillsborough	20 (0.2)	0 (0.0)	10 (0.2)	10 (0.2)	0 (0.0)
Menlo Park	216 (2.0)	74 (10.4)	138 (2.9)	4 (0.1)	0 (0.0)
Millbrae	126 (1.2)	4 (0.6)	37 (0.8)	85 (1.7)	0 (0.0)
Pacifica	482 (4.5)	20 (2.8)	187 (3.9)	275 (5.4)	0 (0.0)
Portola Valley	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Redwood City	1,136 (10.7)	168 (23.6)	818 (17.2)	130 (2.6)	20 (15.4)
San Bruno	640 (6.0)	14 (2.0)	382 (8.0)	240 (4.8)	4 (3.1)
San Carlos	112 (1.1)	8 (1.1)	74 (1.6)	30 (0.6)	0 (0.0)
San Mateo	1,171 (11.0)	24 (3.4)	813 (17.1)	314 (6.2)	20 (15.4)
So. San Francisco	1,187 (11.1)	10 (1.4)	623 (13.1)	515 (10.2)	39 (30.0)
Woodside	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	10,658 (100.0)	712 (100.0)	4,759 (100.0)	5,057 (100.0)	130 (100.0)

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Caltrain Ridership (Systemwide)

Systemwide, San Mateo County has the highest number of origins of Caltrain work trips, while San Francisco has the lowest.

San Mateo: **5,472** or **48%** of work trips
 Santa Clara: **4,369** or **38%** of work trips
 San Francisco: **1,590** or **14%** of work trips

Systemwide, San Francisco has the highest number of destination of Caltrain work trips, while San Mateo has the lowest.

San Francisco: **4,563** or **40%** of work trips
 Santa Clara: **4,184** or **37%** of

work trips
 San Mateo: **2,684** or **23%** of work trips

Systemwide, San Francisco has the highest number of destinations of Caltrain work trips from all cities in the three counties.

San Francisco: **4,563** or **40%** of work trips
 Palo Alto: **1,313** or **12%** of work trips
 San Jose: **810** or **7%** of work trips

Systemwide, San Francisco has the highest number of origins of Caltrain work trips for all cities in the three counties.

San Francisco: **1,775** or **16%** of work trips
 San Mateo (City): **1,364** or **12%** of work trips
 San Jose: **1,162** or **10%** of work trips

Caltrain Ridership San Mateo County - Countywide, Mid-Bayside cities have the highest number of origins of Caltrain work trips.

Mid-Bayside: **2,501** or **22%** of all work trips
 South County: **1,645** or **15%** of all work trips
 North County: **1,222** or **11%** of all work trips

Caltrain Origins and Destinations by City
Work Trips
San Mateo, Santa Clara, and San Francisco Counties

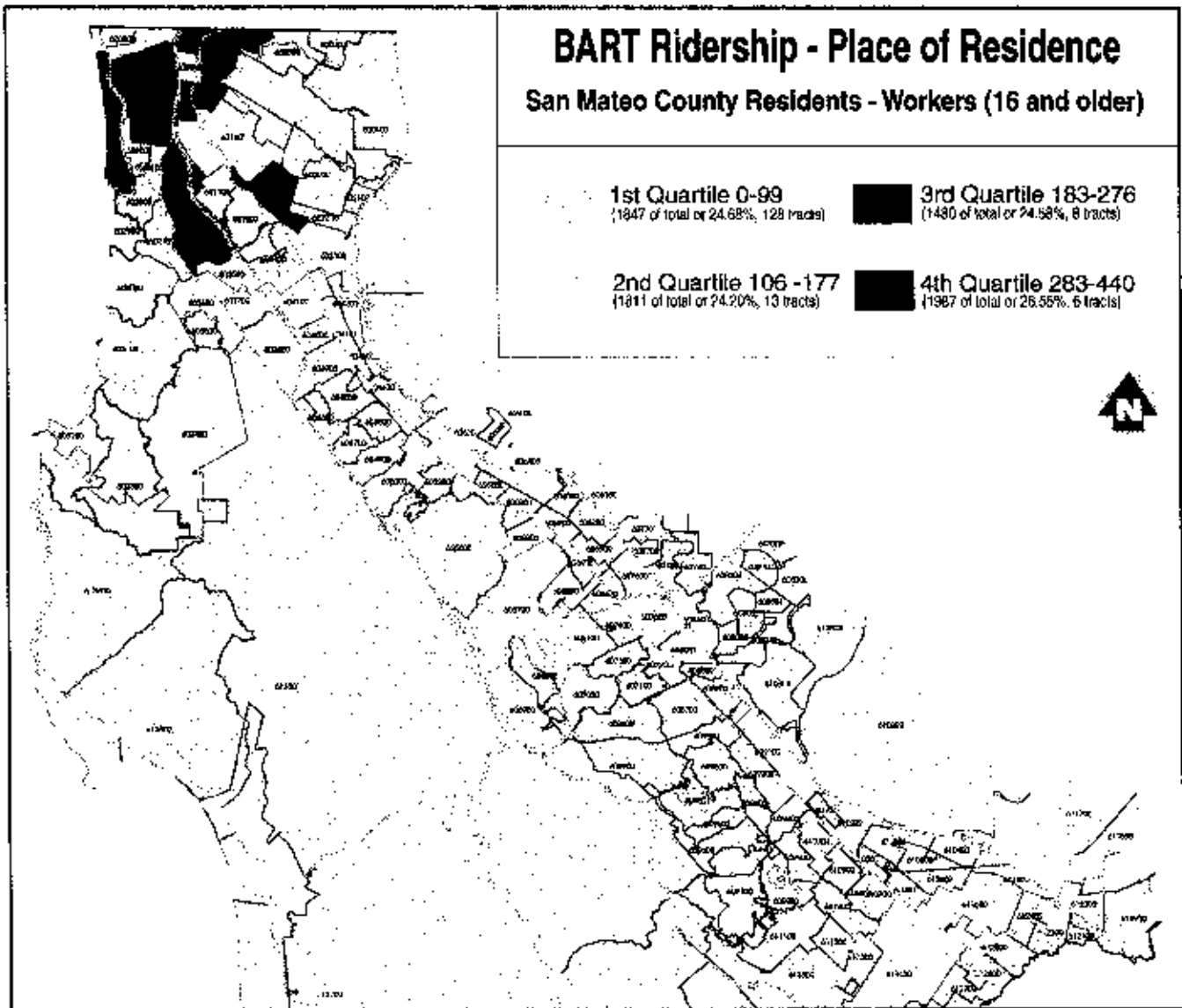
City	Origin		Destination		Total	
San Francisco	1,775	(15.6)	4,563	(40.6)	6,338	(28.0)
San Jose	1,162	(10.2)	810	(7.2)	1,972	(8.7)
Palo Alto	502	(4.4)	1,313	(11.7)	1,815	(8.0)
San Mateo	1,364	(12.0)	392	(3.5)	1,756	(7.7)
Redwood City	901	(7.9)	761	(6.8)	1,662	(7.3)
Sunnyvale	674	(5.9)	601	(5.4)	1,275	(5.6)
Mountain View	602	(5.3)	523	(4.7)	1,125	(5.0)
Santa Clara	333	(2.9)	675	(6.0)	1,008	(4.4)
Burlingame	713	(6.3)	168	(1.5)	881	(3.9)
Menlo Park	278	(2.4)	475	(4.2)	753	(3.3)
South San Francisco	184	(1.6)	333	(3.0)	517	(2.3)
San Carlos	332	(2.9)	183	(1.6)	515	(2.3)
San Bruno	425	(3.7)	14	(0.1)	439	(1.9)
Gilroy	349	(3.1)	10	(0.1)	359	(1.6)
Belmont	282	(2.5)	56	(0.5)	338	(1.5)
Morgan Hill	318	(2.9)	10	(0.1)	328	(1.4)
Daly City	299	(2.6)	22	(0.2)	321	(1.4)
Millbrae	195	(1.7)	63	(0.6)	258	(1.1)
Foster City	142	(1.2)	58	(0.5)	200	(0.9)
Cupertino	44	(0.4)	81	(0.7)	125	(0.6)
Los Altos	77	(0.7)	35	(0.3)	112	(0.5)
Pacifica	105	(0.9)	4	(0.0)	109	(0.5)
Atherton	69	(0.6)	10	(0.1)	79	(0.4)
East Palo Alto	74	(0.7)	0	(0.0)	74	(0.3)
Campbell	50	(0.4)	8	(0.1)	58	(0.3)
Milpitas	25	(0.2)	18	(0.2)	43	(0.2)
Hillsborough	40	(0.4)	0	(0.0)	40	(0.2)
Brisbane	14	(0.1)	22	(0.2)	36	(0.2)
Los Gatos	34	(0.3)	0	(0.0)	34	(0.2)
Saratoga	30	(0.3)	0	(0.0)	30	(0.1)
Los Altos Hills	15	(0.1)	0	(0.0)	15	(0.1)
Half Moon Bay	4	(0.0)	10	(0.1)	14	(0.1)
Woodside	0	(0.0)	4	(0.0)	4	(0.0)
Monte Sereno	0	(0.0)	0	(0.0)	0	(0.0)
Portola Valley	0	(0.0)	0	(0.0)	0	(0.0)
Total	11,411	(100.0)	11,222	(100.0)	22,633	(100.0)

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Caltrain Origins and Destinations from San Mateo Cities to San Mateo, Santa Clara, and San Francisco Counties Work Trips

Origin	Total	To Santa Clara County	To San Mateo County	To San Francisco County
Atherton	69 (1.3)	4 (0.3)	20 (2.0)	45 (1.4)
Belmont	282 (5.2)	120 (9.5)	42 (4.3)	120 (3.8)
Brisbane	14 (0.3)	10 (0.8)	0 (0.0)	4 (0.1)
Burlingame	713 (13.2)	160 (12.7)	143 (14.6)	410 (12.9)
Daly City	299 (5.5)	54 (4.3)	20 (2.0)	225 (7.1)
East Palo Alto	74 (1.4)	39 (3.1)	20 (2.0)	15 (0.5)
Foster City	142 (2.6)	42 (3.3)	10 (1.0)	90 (2.8)
Half Moon Bay	4 (0.1)	4 (0.3)	0 (0.0)	0 (0.0)
Hillsborough	40 (0.7)	10 (0.8)	0 (0.0)	30 (0.9)
Menlo Park	278 (5.1)	49 (3.9)	49 (5.0)	180 (5.7)
Millbrae	195 (3.6)	35 (2.8)	35 (3.6)	125 (3.9)
Pacifica	105 (1.9)	55 (4.4)	10 (1.0)	40 (1.3)
Portola Valley	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Redwood City	901 (16.6)	273 (21.7)	123 (12.6)	505 (15.8)
San Bruno	425 (7.8)	45 (3.6)	105 (10.8)	275 (8.6)
San Carlos	332 (6.1)	38 (3.0)	84 (8.6)	210 (6.6)
San Mateo	1,364 (25.2)	300 (23.9)	249 (25.4)	815 (25.6)
South San Francisco	184 (3.4)	20 (1.6)	69 (7.1)	95 (3.0)
Woodside	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	5421 (100.0)	1,258 (100.0)	979 (100.0)	3,184 (100.0)

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Bart Ridership

Countywide, North County cities have the highest number of origins of BART work trips.

North County: **6,703** or **92%** of all work trips

Mid-Bayside: **367** or **5%** of all work trips

South County: **116** or **2%** of all work trips

San Francisco is the predominant destination of BART work trips for San Mateo Cities.

Eighty six percent (**6193** riders) of all San Mateo County BART work trips end in San Francisco.

Countywide, Daly City is the Predominant Origin of BART work trips.

Fifty four percent (**3965** riders) of all San Mateo County BART work trips originate in Daly City.

San Francisco is the Predominant Destination of Daly City BART work trips.

Eighty one percent (**3210** riders) of BART work trips that originate in Daly City end in San Francisco.

BART Origins and Destinations by City
Work Trips
San Mateo and San Francisco Counties

City	Origin	Destination	Total
San Francisco	1344	26,193 (0.861)	6,537 (0.441)
Atherton	0 (0.000)	0 (0.000)	0 (0.000)
Belmont	20 (0.003)	4 (0.001)	24 (0.002)
Brisbane	15 (0.002)	49 (0.007)	64 (0.004)
Burlingame	124 (0.017)	59 (0.008)	183 (0.012)
Daly City	3,965 (0.544)	119 (0.017)	4,084 (0.276)
East Palo Alto	14 (0.002)	20 (0.003)	34 (0.002)
Foster City	44 (0.006)	10 (0.001)	54 (0.004)
Half Moon Bay	100 (0.014)	40 (0.005)	140 (0.009)
Hillsborough	25 (0.003)	4 (0.001)	29 (0.002)
Menlo Park	10 (0.001)	50 (0.007)	60 (0.004)
Millbrae	139 (0.019)	34 (0.005)	173 (0.012)
Pacifica	979 (0.134)	14 (0.002)	993 (0.067)
Portola Valley	0 (0.000)	0 (0.000)	0 (0.000)
Redwood City	38 (0.005)	88 (0.012)	126 (0.009)
San Bruno	499 (0.069)	104 (0.014)	603 (0.041)
San Carlos	50 (0.007)	23 (0.003)	73 (0.005)
San Mateo	154 (0.021)	100 (0.014)	254 (0.017)
South San Francisco	1,106 (0.152)	278 (0.039)	1,384 (0.093)
Woodside	4 (0.001)	0 (0.000)	4 (0.000)
Total	7,286 (1.000)	7,189 (1.000)	14,819 (1.000)

¹ Number represents only those trips from San Francisco to San Mateo County cities.

² Number represents only those trips from San Mateo County cities to San Francisco.

³ Total does not include San Francisco.



Occupation of Residents

Occupations of Residents

Transit

SamTrans

- Sixteen percent (1932 riders) work in Office and Administrative Support Occupations
- Thirteen percent (1569 riders) work in Food, Preparation, and Serving Related Occupations
- Thirteen percent (1569 riders) work in Sales and Related Occupations

Caltrain

- Eighteen percent (1061 riders) work in Office and Administrative Support Occupations
- Fifteen percent (884 riders) work in Computer and Mathematical Occupations
- Eleven percent (648 riders) work in Management Occupations

BART

- Nineteen percent (1422 riders) work in Office and Administrative Support Occupations
- Fifteen percent (1122 riders) work in Management Occupations
- Nine percent (673 riders) work in Computer and Mathematical Occupations
- Nine percent (673 riders) work in Sales and Related Occupations

Automobile

Drive Alone

- Fifteen percent (38,410 drivers) work in Office and Administrative Support Occupations
- Fourteen percent (35,849 drivers) work in Management Occupations
- Eleven percent (28,167) work in Sales and Related Occupations

2 Person Carpool

- Fifteen percent (5,289 carpoolers) work in Office and Administrative Support Occupations
- Ten percent (3,526 carpoolers) work in Sales and Related Occupations
- Nine percent (3,173 carpoolers) work in Management Occupations

3 Person Carpool

- Fourteen percent (929 carpoolers) work in Office and Administrative Support Occupations
- Eleven percent (729 carpoolers) work in Production Operations
- Ten percent (633 carpoolers) work in construction and Excavation Operations

4 Person Carpool

- Fifteen percent (316 carpoolers) work in Installation, Maintenance and Repair Occupations
- Fourteen percent (295 carpoolers) work in Office and Administrative Support Occupations
- Ten percent (210 carpoolers) work in Production Occupations

Occupations of Residents By Mode of Transportation to Work San Mateo County

	Drive Alone	Carpool 2-Person	Carpool 3-Person	Carpool 4-Person	SanTrans	BART	Caltrain	Bicycle or Walked	Taxi, Motorcycle or Other Means	Worked at Home
Office & Administrative Support Occupations	38,410 (.15)	5,289 (.15)	929 (.14)	295 (.14)	1,832 (.16)	1,422 (.19)	1,081 (.18)	1,261 (.12)	314 (.09)	1,285 (.10)
Management Occupations	35,849 (.14)	3,173 (.09)	531 (.08)			1,122 (.15)	648 (.11)	736 (.07)	314 (.09)	1,927 (.15)
Sales & Related Occupations	28,187 (.11)	3,526 (.10)	484 (.07)		1,569 (.13)	673 (.09)	353 (.06)	1,261 (.12)		1,670 (.13)
Computer & Mathematical Occupations	17,924 (.07)	2,820 (.08)				673 (.09)	684 (.15)		385 (.11)	
Business & Financial Operations Specialists	15,364 (.06)					524 (.07)	412 (.07)			1,670 (.13)
Construction & Excavation Occupations		2,820 (.08)	663 (.10)	148 (.07)						
Production Occupations			729 (.11)	210 (.10)				736 (.07)		
Building, Grounds Cleaning & Maintenance Occupations			464 (.07)	169 (.08)	1,086 (.09)					
Installation, Maintenance & Repair Occupations				316 (.15)						
Food, Preparation & Serving Related Occupations					1,569 (.13)			1,136 (.11)		
Transportation & Material Moving Occupations					1,086 (.09)				429 (.12)	
Arts, Design, Entertainment, Sports & Media Occupations										1,285 (.10)
Personal Care & Service Occupations							353 (.06)		359 (.10)	1,285 (.10)

Continued on next page



Technical Appendix

Mode of Travel from San Mateo County To San Mateo County Cities - Work Trips

	Total	Drive Alone	Carpool	SamTrans	BART	Caltrain
Atherton	1,665 (0.9)	1,005 (0.8)	76 (0.4)	49 (1.0)	0 (0.0)	10 (1.0)
Belmont	4,790 (2.7)	3,615 (2.8)	371 (1.8)	55 (1.1)	0 (0.0)	38 (3.6)
Brisbane	3,110 (1.7)	2,525 (1.9)	313 (1.5)	80 (1.7)	15 (6.5)	14 (1.3)
Burlingame	16,350 (9.1)	12,265 (9.4)	1,894 (9.2)	640 (13.5)	25 (10.9)	82 (7.8)
Daly City	9,790 (5.4)	6,460 (5.0)	1,361 (6.6)	396 (8.3)	39 (17.0)	22 (2.1)
East Palo Alto	1,580 (0.9)	985 (0.8)	227 (1.1)	30 (0.6)	0 (0.0)	0 (0.0)
Foster City	9,220 (5.1)	7,084 (5.5)	974 (4.7)	143 (3.0)	0 (0.0)	18 (1.7)
Half Moon Bay	4,545 (2.5)	2,795 (2.2)	672 (3.3)	32 (0.7)	10 (4.4)	14 (1.3)
Hillsborough	1,475 (0.8)	765 (0.6)	144 (0.7)	15 (0.3)	0 (0.0)	0 (0.0)
Menlo Park	13,915 (7.7)	8,310 (6.4)	1,458 (7.1)	192 (4.0)	10 (4.4)	135 (12.9)
Millbrae	4,230 (2.3)	2,790 (2.2)	379 (1.8)	193 (4.1)	4 (1.7)	25 (2.4)
Pacifica	3,860 (2.2)	2,485 (1.9)	471 (2.3)	118 (2.5)	4 (1.7)	4 (0.4)
Portola Valley	860 (0.5)	390 (0.3)	170 (0.8)	0 (0.0)	0 (0.0)	0 (0.0)
Redwood City	30,180 (16.8)	22,320 (17.2)	3,421 (16.6)	531 (11.2)	30 (13.0)	218 (20.8)
San Bruno	9,385 (5.2)	8,880 (5.3)	1,097 (5.3)	370 (7.8)	10 (4.4)	14 (1.3)
San Carlos	11,230 (6.2)	8,465 (6.5)	1,052 (5.1)	343 (7.2)	15 (6.5)	109 (10.4)
San Mateo	29,880 (16.6)	22,265 (17.2)	3,284 (16.0)	877 (18.4)	36 (13.0)	159 (15.1)
South San Francisco	22,655 (12.6)	17,210 (13.3)	3,091 (15.0)	895 (14.6)	38 (16.5)	184 (17.5)
Woodside	1,405 (0.8)	845 (0.7)	133 (0.7)	0 (0.0)	0 (0.0)	4 (0.4)
Total	180,145 (100.0) (100.0)	129,459 (100.0) (71.9)	20,588 (100.0) (11.4)	4,759 (100.0) (2.6)	230 (100.0) (0.1)	1,050 (100.0) (0.6)

NOTE: VALUES MAY VARY

Mode of Travel from San Francisco To San Mateo County Cities - Work Trips

	Total	Drive Alone	Carpool	SamTrans	BART	Caltrain
Atherton	185 (0.5)	140 (0.5)	39 (0.8)	10 (0.5)	0 (0.0)	0 (0.0)
Belmont	515 (1.4)	435 (1.5)	44 (0.8)	10 (0.5)	0 (0.0)	10 (1.4)
Brisbane	1,935 (5.1)	1,165 (4.1)	455 (8.7)	210 (10.7)	30 (8.7)	0 (0.0)
Burlingame	3,610 (9.5)	2,755 (9.7)	565 (10.8)	135 (8.9)	10 (2.9)	45 (6.4)
Daly City	3,065 (8.1)	2,145 (7.6)	364 (7.0)	395 (20.1)	35 (10.1)	0 (0.0)
East Palo Alto	170 (0.5)	115 (0.4)	19 (0.3)	0 (0.0)	10 (2.9)	0 (0.0)
Foster City	2,135 (5.6)	1,870 (6.6)	200 (3.8)	15 (0.7)	0 (0.0)	20 (2.8)
Half Moon Bay	280 (0.7)	155 (0.6)	30 (0.6)	40 (2.0)	30 (8.7)	0 (0.0)
Hillsborough	195 (0.5)	155 (0.6)	39 (0.8)	0 (0.0)	0 (0.0)	0 (0.0)
Menlo Park	2,035 (5.4)	1,395 (4.9)	340 (6.5)	60 (3.1)	30 (8.7)	160 (22.9)
Millbrae	740 (2.0)	585 (2.0)	89 (1.7)	15 (0.8)	10 (2.9)	30 (4.3)
Pacifica	640 (1.7)	530 (1.8)	60 (1.2)	30 (1.5)	0 (0.0)	0 (0.0)
Portola Valley	50 (0.1)	20 (0.1)	24 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)
Redwood City	5,355 (14.2)	4,170 (14.7)	648 (12.4)	145 (7.3)	30 (8.7)	195 (27.9)
San Bruno	2,170 (5.8)	1,885 (5.9)	310 (5.9)	125 (6.4)	30 (8.7)	0 (0.0)
San Carlos	970 (2.6)	890 (2.4)	155 (3.0)	40 (2.0)	4 (1.2)	25 (3.6)
San Mateo	4,775 (12.7)	3,740 (13.2)	520 (9.9)	145 (7.3)	40 (11.6)	175 (25.0)
South San Francisco	8,785 (23.3)	6,555 (23.1)	1,315 (25.1)	595 (30.2)	85 (24.7)	40 (5.7)
Woodside	105 (0.3)	80 (0.3)	20 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
Total	37,715 (100.0) (100.0)	28,365 (100.0) (75.2)	5,236 (100.0) (13.8)	1,970 (100.0) (5.2)	344 (100.0) (0.9)	700 (100.0) (1.9)

NOTE: VALUES MAY VARY

Mode of Travel to San Francisco From San Mateo County Cities - Work Trips

Origin	Total	Drive Alone	Carpool	SanTrans	BART	Caltrain
Atherton	280 (0.4)	205 (0.5)	10 (0.1)	0 (0.0)	0 (0.0)	45 (1.4)
Belmont	1,470 (2.1)	1,115 (2.8)	185 (1.5)	25 (0.4)	20 (0.3)	120 (3.8)
Brisbane	735 (1.1)	495 (1.2)	120 (1.0)	70 (1.4)	15 (0.2)	4 (0.1)
Burlingame	2,835 (4.0)	1,995 (4.7)	265 (2.1)	35 (0.7)	120 (1.8)	410 (12.9)
Daly City	25,905 (38.8)	12,855 (30.3)	5,790 (47.1)	3,005 (59.5)	3,365 (54.4)	225 (7.1)
East Palo Alto	290 (0.4)	175 (0.4)	65 (0.5)	20 (0.4)	10 (0.2)	15 (0.5)
Foster City	1,915 (2.7)	1,340 (3.2)	200 (1.6)	250 (4.9)	25 (0.4)	90 (2.8)
Half Moon Bay	1,120 (1.6)	850 (2.0)	120 (1.0)	49 (1.0)	90 (1.5)	0 (0.0)
Hillsborough	1,130 (1.6)	855 (2.0)	205 (1.8)	10 (0.2)	25 (0.4)	30 (0.9)
Menlo Park	745 (1.1)	535 (1.3)	19 (0.2)	4 (0.1)	0 (0.0)	180 (5.7)
Millbrae	2,295 (3.3)	1,495 (3.5)	445 (3.6)	85 (1.7)	135 (2.2)	125 (3.9)
Pacifica	7,125 (10.1)	4,855 (11.5)	1,105 (9.0)	275 (5.4)	775 (12.5)	40 (1.2)
Portola Valley	155 (0.2)	135 (0.3)	15 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)
Redwood City	2,705 (3.9)	1,755 (4.1)	279 (2.3)	130 (2.6)	4 (0.1)	505 (15.9)
San Bruno	5,445 (7.7)	3,415 (8.1)	975 (7.9)	240 (4.8)	430 (7.0)	275 (8.6)
San Carlos	1,415 (2.0)	1,040 (2.5)	84 (0.7)	30 (0.6)	50 (0.8)	210 (6.6)
San Mateo	8,125 (8.7)	4,245 (10.0)	548 (4.5)	314 (6.2)	130 (2.1)	815 (25.6)
South San Francisco	8,495 (12.1)	4,885 (11.5)	1,865 (15.2)	510 (10.1)	885 (15.9)	95 (3.0)
Woodside	145 (0.2)	140 (0.3)	0 (0.0)	0 (0.0)	4 (0.1)	0 (0.0)
Total	70,310 (100.0)	42,365 (100.0)	12,295 (100.0)	5,052 (100.0)	6,183 (100.0)	3,184 (100.0)
	(100.0)	(80.3)	(17.5)	(7.2)	(8.8)	(4.5)

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Mode of Travel from Santa Clara County To San Mateo County Cities - Work Trips

	Total	Drive Alone	Carpool	SanTrans	BART	Caltrain
Atherton	290 (0.9)	270 (0.9)	18 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)
Belmont	550 (1.6)	409 (1.5)	108 (2.6)	14 (3.9)	0 (0.0)	8 (0.9)
Brisbane	220 (0.6)	190 (0.7)	10 (0.2)	10 (2.8)	0 (0.0)	8 (0.9)
Burlingame	1,230 (3.6)	990 (3.5)	168 (4.1)	10 (2.8)	0 (0.0)	49 (5.3)
Daly City	280 (0.8)	240 (0.8)	18 (0.4)	0 (0.0)	0 (0.0)	4 (0.4)
East Palo Alto	445 (1.3)	355 (1.3)	80 (2.0)	10 (2.8)	0 (0.0)	0 (0.0)
Foster City	1,575 (4.6)	1,455 (5.2)	163 (4.0)	8 (2.3)	0 (0.0)	20 (2.1)
Half Moon Bay	85 (0.3)	55 (0.2)	0 (0.0)	4 (1.1)	0 (0.0)	0 (0.0)
Hillsborough	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Menlo Park	9,760 (28.7)	1 (29.1)	1,014 (24.7)	90 (25.3)	0 (0.0)	190 (20.3)
Millbrae	355 (1.0)	285 (1.0)	43 (1.1)	10 (2.8)	0 (0.0)	8 (0.8)
Pacifica	75 (0.2)	50 (0.2)	20 (0.5)	4 (1.1)	0 (0.0)	0 (0.0)
Portola Valley	190 (0.6)	175 (0.6)	14 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
Redwood City	9,890 (29.0)	8,070 (28.5)	1,285 (30.8)	74 (20.8)	0 (0.0)	402 (43.0)
San Bruno	725 (2.1)	600 (2.1)	93 (2.3)	10 (2.8)	0 (0.0)	10 (1.1)
San Carlos	2,195 (6.5)	1,760 (6.2)	333 (8.1)	18 (5.1)	0 (0.0)	63 (6.8)
San Mateo	3,965 (11.6)	3,295 (11.7)	475 (11.6)	90 (25.3)	0 (0.0)	78 (8.4)
South San Francisco	2,000 (5.9)	1,650 (5.9)	216 (5.2)	4 (1.1)	0 (0.0)	94 (10.1)
Woodside	225 (0.7)	160 (0.6)	70 (1.7)	0 (0.0)	0 (0.0)	0 (0.0)
Total	34,855 (100.0)	28,229 (100.0)	4,108 (100.0)	356 (100.0)	0 (0.0)	934 (100.0)
	(100.0)	(82.9)	(12.1)	(1.1)	(0.0)	(2.7)

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Mode of Travel from San Mateo County To Santa Clara County Cities - Work Trips

	Total	Drive Alone	Carpool	SanTrans	BART	Caltrain
Campbell	385 (0.8)	315 (0.8)	102 (2.0)	4 (0.6)	0 (0.0)	0 (0.0)
Cupertino	1,660 (3.6)	1,435 (3.7)	147 (2.9)	4 (0.6)	0 (0.0)	22 (1.8)
Gilroy	70 (0.2)	60 (0.2)	14 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
Los Altos	935 (2.0)	850 (2.2)	107 (2.1)	25 (3.5)	0 (0.0)	25 (2.0)
Los Altos Hills	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Los Gatos	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Millipitas	1,070 (2.3)	960 (2.5)	91 (1.8)	4 (0.6)	0 (0.0)	4 (0.3)
Monte Sereno	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Morgan Hill	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Mountain View	6,175 (13.3)	5,185 (13.4)	714 (14.0)	18 (2.5)	0 (0.0)	138 (11.1)
Palo Alto	15,600 (33.4)	12,670 (33.0)	1,564 (30.7)	462 (64.8)	0 (0.0)	439 (35.5)
San Jose	10,410 (22.5)	8,545 (22.2)	1,271 (25.0)	98 (13.7)	22 (100.0)	230 (18.8)
Santa Clara	5,310 (11.5)	4,460 (11.6)	568 (11.1)	48 (6.7)	0 (0.0)	147 (11.9)
Saratoga	20 (0.0)	4 (0.0)	4 (0.1)	10 (1.4)	0 (0.0)	0 (0.0)
Sunnyvale	4,830 (10.4)	3,960 (10.4)	509 (10.0)	39 (5.5)	0 (0.0)	233 (18.8)
Total	46,365 (100.0)	38,454 (100.0)	5,089 (100.0)	712 (100.0)	22 (100.0)	1,238 (100.0)
	(100.0)	(82.9)	(11.0)	(1.5)	(0.1)	(2.7)

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Mode of Travel from Alameda County To San Mateo County Cities - Work Trips

	Total	Drive Alone	Carpool	Bus	BART	Caltrain
Atherton	25 (0.1)	25 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Belmont	470 (1.7)	380 (1.9)	62 (1.0)	4 (1.3)	0 (0.0)	10 (7.4)
Brisbane	575 (2.1)	400 (2.1)	143 (2.3)	0 (0.0)	4 (1.0)	0 (0.0)
Burlingame	2,205 (8.0)	1,665 (8.5)	412 (6.7)	25 (8.2)	24 (5.7)	39 (28.9)
Daly City	495 (1.8)	335 (1.7)	82 (1.3)	10 (3.3)	45 (10.7)	0 (0.0)
East Palo Alto	295 (1.1)	185 (1.0)	101 (1.8)	0 (0.0)	10 (2.4)	0 (0.0)
Foster City	2,055 (7.4)	1,580 (8.1)	367 (6.5)	24 (7.8)	10 (2.4)	0 (0.0)
Half Moon Bay	20 (0.1)	20 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Hillsborough	40 (0.1)	25 (0.1)	10 (0.2)	0 (0.0)	4 (1.0)	0 (0.0)
Menlo Park	4,655 (16.8)	3,050 (15.8)	1,136 (18.5)	140 (45.7)	10 (2.4)	10 (7.4)
Millbrae	310 (1.1)	215 (1.1)	66 (1.1)	0 (0.0)	20 (4.7)	4 (3.0)
Pacifica	70 (0.3)	40 (0.2)	20 (0.3)	0 (0.0)	10 (2.4)	0 (0.0)
Portola Valley	25 (0.1)	4 (0.0)	20 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
Redwood City	5,975 (21.8)	4,423 (22.7)	1,424 (23.1)	14 (4.8)	28 (6.7)	0 (0.0)
San Bruno	1,135 (4.1)	780 (3.8)	286 (4.3)	4 (1.3)	84 (15.3)	0 (0.0)
San Carlos	1,525 (5.5)	1,114 (5.7)	343 (5.8)	30 (9.8)	4 (1.0)	10 (7.4)
San Mateo	4,460 (16.1)	3,005 (15.4)	824 (15.0)	25 (8.2)	30 (7.2)	38 (28.1)
South San Francisco	3,250 (11.8)	2,245 (11.5)	749 (12.2)	30 (9.8)	155 (37.1)	24 (17.8)
Woodside	60 (0.2)	60 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	27,645 (100.0)	18,531 (100.0)	6,157 (100.0)	306 (100.0)	418 (100.0)	135 (100.0)
	(100.0)	(70.7)	(22.3)	(1.1)	(1.5)	(0.5)

MUTRAP2000 - MDO0919_APT0002(0004)

Mode of Travel from San Mateo County To Alameda County Cities - Work Trips

	Total	Drive Alone	Carpool	Bus	BART	Caltrain
Alameda	290 (2.2)	250 (2.5)	28 (1.8)	4 (3.9)	0 (0.0)	0 (0.0)
Albany	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Berkeley	695 (5.4)	494 (4.9)	76 (4.3)	25 (24.0)	73 (9.5)	4 (11.1)
Castro Valley	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Dublin	75 (0.6)	70 (0.7)	4 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)
Emeryville	600 (4.8)	505 (5.0)	43 (2.4)	0 (0.0)	40 (5.2)	0 (0.0)
Fremont	1,885 (14.5)	1,680 (16.7)	168 (9.4)	10 (9.6)	14 (1.8)	0 (0.0)
Hayward	3,135 (24.1)	2,635 (26.2)	469 (26.2)	0 (0.0)	0 (0.0)	0 (0.0)
Livermore	120 (0.9)	100 (1.0)	19 (1.1)	0 (0.0)	0 (0.0)	0 (0.0)
Newark	630 (4.9)	465 (4.6)	131 (7.3)	0 (0.0)	0 (0.0)	20 (55.6)
Oakland	3,620 (27.9)	2,300 (22.9)	589 (33.0)	65 (62.5)	569 (74.0)	8 (22.2)
Pleasanton	680 (5.3)	590 (5.8)	87 (3.7)	0 (0.0)	20 (2.6)	0 (0.0)
Piedmont	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
San Leandro	745 (5.7)	540 (5.4)	138 (7.7)	0 (0.0)	49 (6.4)	0 (0.0)
San Lorenzo	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Union City	510 (3.9)	435 (4.3)	55 (3.1)	0 (0.0)	4 (0.5)	4 (11.1)
Total	12,985 (100.0)	10,984 (100.0)	1,787 (100.0)	104 (100.0)	769 (100.0)	36 (100.0)
	(100.0)	(77.5)	(13.7)	(0.8)	(5.9)	(0.2)

MDC00000 - MDC00000 - RTT.DOC (03/04)

Mode of Travel from San Francisco To Santa Clara County Cities - Work Trips

	Total	Drive Alone	Carpool	SanTrans	BART	Caltrain
Campbell	255 (1.7)	210 (2.0)	35 (1.6)	10 (2.3)	0 (0.0)	0 (0.0)
Cupertino	665 (4.6)	425 (4.1)	135 (6.0)	35 (8.1)	0 (0.0)	45 (5.1)
Gilroy	40 (0.3)	0 (0.0)	30 (1.3)	0 (0.0)	0 (0.0)	10 (1.1)
Los Altos	195 (1.3)	180 (1.5)	10 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)
Milpitas	445 (3.0)	300 (3.0)	70 (3.1)	70 (16.1)	0 (0.0)	0 (0.0)
Mountain View	1,895 (13.1)	1,390 (13.4)	260 (11.5)	65 (15.0)	25 (15.7)	140 (15.7)
Palo Alto	3,090 (25.4)	2,885 (27.8)	370 (16.4)	45 (10.4)	45 (28.3)	310 (34.8)
San Jose	3,410 (29.5)	2,330 (22.5)	575 (25.5)	145 (33.4)	40 (25.2)	100 (11.2)
Santa Clara	2,155 (14.9)	1,465 (14.1)	424 (18.8)	35 (8.1)	4 (2.5)	165 (18.6)
Saratoga	55 (0.4)	40 (0.4)	10 (0.4)	4 (0.9)	0 (0.0)	0 (0.0)
Sunnyvale	1,705 (11.8)	1,185 (11.2)	339 (15.0)	25 (5.7)	45 (28.3)	120 (13.5)
Total	14,510 (100.0)	10,370 (100.0)	2,258 (100.0)	434 (100.0)	159 (100.0)	690 (100.0)
	(100.00)	(71.5)	(15.6)	(3.0)	(1.1)	(6.1)

MDC00000 - MDC00000 - RTT.DOC (03/04)

Mode of Travel to San Francisco From Santa Clara County Cities - Work Trips

Origin	Total	Drive Alone	Carpool	Bus	BART	Caltrain
Alum Rock	30 (0.4)	30 (0.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Campbell	180 (2.3)	140 (2.8)	14 (1.6)	0 (0.0)	0 (0.0)	25 (1.8)
Cupertino	215 (2.8)	180 (3.7)	30 (3.5)	4 (1.4)	0 (0.0)	0 (0.0)
East Foothills	35 (0.5)	15 (0.3)	0 (0.0)	0 (0.0)	20 (11.5)	0 (0.0)
Gilroy	30 (0.4)	20 (0.4)	0 (0.0)	10 (3.5)	0 (0.0)	0 (0.0)
Los Altos	240 (3.1)	165 (3.4)	0 (0.0)	0 (0.0)	10 (5.8)	55 (4.0)
Los Altos Hills	100 (1.3)	80 (1.6)	4 (0.5)	0 (0.0)	0 (0.0)	15 (1.1)
Los Gatos	205 (2.6)	125 (2.5)	40 (4.6)	0 (0.0)	0 (0.0)	30 (2.2)
Loyola	25 (0.3)	20 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Milpitas	225 (2.9)	165 (3.4)	4 (0.5)	0 (0.0)	30 (17.2)	25 (1.8)
Morgan Hill	130 (1.7)	100 (2.0)	10 (1.2)	0 (0.0)	0 (0.0)	20 (1.5)
Mountain View	830 (10.7)	480 (9.7)	50 (5.8)	55 (19.0)	0 (0.0)	230 (16.7)
Palo Alto	870 (11.2)	665 (11.5)	85 (9.9)	10 (3.5)	4 (2.3)	200 (14.5)
San Jose	3,060 (39.5)	2,015 (40.9)	440 (51.2)	175 (60.5)	60 (34.5)	330 (23.9)
Santa Clara	535 (6.9)	280 (5.7)	49 (5.7)	10 (3.5)	35 (20.1)	155 (11.2)
Saratoga	165 (2.1)	135 (2.7)	0 (0.0)	0 (0.0)	0 (0.0)	30 (2.2)
Stanford	45 (0.6)	25 (0.5)	4 (0.5)	0 (0.0)	0 (0.0)	4 (0.3)
Sunnyvale	830 (10.7)	390 (7.9)	129 (15.0)	25 (8.6)	15 (8.6)	260 (18.8)
Total	7,750 (100.0)	4,930 (100.0)	359 (100.0)	289 (100.0)	174 (100.0)	1,379 (100.0)
	(100.0)	(83.6)	(11.1)	(3.7)	(2.3)	(17.6)

ML05 - MLD05A, MFD05, MFD05A

Top 18 Work Destination Work Trips

City	Workers
San Francisco	70,310 (19.9)
San Mateo	30,115 (8.5)
Redwood City	27,840 (7.9)
South San Francisco	22,655 (6.4)
Burlingame	16,420 (4.6)
Palo Alto	15,815 (4.5)
Menlo Park	13,625 (3.9)
San Carlos	11,255 (3.2)
San Jose	10,430 (3.0)
Daly City	9,675 (2.7)
Foster City	9,240 (2.6)
San Bruno	6,400 (1.8)
Mountain View	6,175 (1.7)
Santa Clara	5,440 (1.5)
Sunnyvale	4,834 (1.4)
Belmont	4,619 (1.3)
Millbrae	4,248 (1.2)
Brisbane	3,110 (0.9)
Total	(77.0)

Percentages of workers for each city are based on the total number of workers in San Mateo County.

Total workers in San Mateo County = 354,096

TAM05 - TAM05A, MFD05, MFD05A

Percent of Workers Living and Working in the Same City

San Mateo County Total	16.5
San Mateo	24.3
South San Francisco	20.0
Woodside	19.8
Burlingame	19.1
Redwood City	18.1
Atherton	17.6
Half Moon Bay	15.9
San Carlos	15.5
Hillsborough	14.7
Foster City	14.5
Menlo Park	13.9
East Palo Alto	13.8
San Bruno	13.4
Brisbane	12.9
Pacifica	12.4
Millbrae	11.7
Portola Valley	11.1
Belmont	9.5
Daly City	8.5

ML05 - MLD05A, MFD05, MFD05A

otp-census data pub.cdr 12/28/04 ss

Transportation Data - Census 2000

January 2005